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Prepared by:

McLaren/Hart
16755 Von Karman
Irvine, California 92714-4918

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ADDITIONAL SOIL SAMPLING AT MOBIL JALK FEE PROPERTY 10607 NORWALK BOULEVARD SANTA FE SPRINGS, CALIFORNIA (03.0601414.001.001)

McLaren Hart ®
ENVIRONMENTAL ENGINEERING CORPORATION

Additional Soil Sampling

McLaren/Hart Project No. 03.0601414.001.001

Mobil Jalk Fee Property
10607 Norwalk Boulevard
Santa Fe Springs, California

September 20, 1996

Prepared for: Manny Galaviz, P.E.
Mobil Exploration and Producing U.S. Inc.
1000 Ming Avenue
Bakersfield, California 93311

Prepared by: **McLaren/Hart, Inc.** 16755 Von Karman Avenue
Irvine, California 92606

Hassan Amini, Ph.D., R.G.
Principal Geoscientist

Tabb W. Bubier
Supervising Geoscientist

Everett Ferguson Jr.
Associate Geoscientist

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1.0 INTRODUCTION

Mobil Exploration and Producing U.S. Inc. (Mobil) retained McLaren/Hart, Inc. (McLaren/Hart) to perform additional soil sampling and analysis at Mobil's Jalk Fee Property. The Jalk Fee Property is located at 10607 Norwalk Boulevard, Santa Fe Springs, California (Figure 1). The work was performed between December 18 and 29, 1995, in accordance with the workplan entitled *Proposal to Conduct Additional Sampling for Mobil Jalk Fee Property, 10607 Norwalk Blvd., Santa Fe Springs, California (IR95-0688)* dated December 12, 1995, and the *Change Order for Mobil Jalk Fee Property, 10607 Norwalk Blvd., Santa Fe Springs, California* dated December 19, 1995.

The investigation consisted of advancing 17 Geoprobes, 20 hand augers, and 2 soil borings (drilled by hollow stem auger) to obtain and analyze soil samples and advancing 9 soil probes to analyze soil gas concentrations. The general objective of the additional soil sampling activities was to detect the presence and/or characterize the distribution of total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), including aromatic volatile organic compounds (BTEX), and/or halogenated volatile organic compounds (HVOCs).

1.1 INVESTIGATION OBJECTIVES

The additional sampling activities were divided into three tasks. These tasks and the associated objectives are presented below.

Task 1 - Oil Production Well and Tank Battery

- Determine the presence of TPH along the north, south, and east perimeters of the tank battery.

Task 2 - Bioremediation Cell Closure Sampling

- Verify that remediation activities did not impact the native soil beneath the former bioremediation cells.

Task 3 - Northwest Perimeter, Northeast Perimeter, Area Adjacent to Continental Heat Treating, Inc. (Tetrachloroethene Impacted Area), and Area of Former Trucking Company

- Assess the presence of VOCs and TPH near borings SS-1, -3, -4, and -7 and adjacent to the equipment repair/storage yards.

- Further define/verify the lateral and vertical extent of the tetrachloroethene (PCE) impact to the soil in the area adjacent to Continental Heat Treating, Inc.

- Determine if former trucking operation activities impacted the subsurface in the central portion of the site. (Area of Former Trucking Company)

The Mobil Jalk Fee Property site layout, with the areas of Tasks 1, 2, and 3 identified, is presented in Figure 2.

1.2 Site History and Description

During the early 1900's, oil was discovered near the subject site, and shortly after, the area became an active oil field. The subject site consists of 8.8 acres of undeveloped land located in the southwest portion of the oil field. In the past 20 years, some industrial and commercial development has occurred on the periphery of the oil field and has entirely surrounded the subject site. Currently, the site contains four active oil wells and a small tank battery.

1.3 Previous Work

Prior to McLaren/Hart, Levine-Fricke generated the following reports on the Jalk Fee property:

- *Draft Subsurface Soil Investigation Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California* dated December 6, 1991
- *Draft Remedial Action Plan Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California* dated December 18, 1991

According to Levine-Fricke (1991a), the Jalk Fee property has been used for oil production from the 1920s to the present. The current tenant, Hathaway Company, has conducted oil production activities at the site from the early 1980s to the present (Levine-Fricke, 1991b).

Most of the Jalk Fee property is undeveloped land with four active oil wells and a small tank battery. The tank battery is in the northwest corner of the site and contains six above ground tanks. Three of the active oil wells are near the northern property boundary and one well is near the southern boundary. According to Levine-Fricke (1991b), five oil wells have been abandoned on the property and approximately eight former sumps (i.e., mud pits) associated with oil drilling and production have been observed in historic aerial photographs.

According to Levine-Fricke (1991b), a small oil refuse area where metal objects were deposited (referred to as the boneyard area) was located in the southwest portion of the property from approximately 1920 until 1942. An aboveground storage tank farm was formerly located in the southeast portion of the property in the late 1920s and early 1930s (Levine-Fricke, 1991b).

According to Levine-Fricke (1991b), Woodward-Clyde Consultants (WCC) completed a subsurface investigation at the Jalk Fee property in August, 1988. The investigation included a geophysical survey, surface soil sampling, and a soil boring and sampling program. The study was cancelled by a party other than Mobil prior to completion and only a "partial report" was prepared by WCC. The results were summarized in WCC's report dated September 14, 1988 entitled "Preliminary Investigation Report". WCC reportedly detected what were believed to be solvent odors and vapor discharge from borings in the eastern section of the property.

According to Levine-Fricke (1991a), during discussions with Mobil it was reported "that the eastern portion of the site was leased at one time to a company that used solvents along that portion of the site." Recent investigations by Mobil personnel have revealed that the

aforementioned leased property was located in the northeast portion of the property. The southern boundary of the leased property was approximately 70 feet north of the Tetrachloroethene (PCE) Impacted Area (which is adjacent to the southern boundary of the Jalk Fee property). Additionally, Mobil personnel have indicated that the source of Levine-Fricke's information regarding the eastern portion of the site was not from a Mobil representative but rather originated from the current operator of the Jalk Fee oil wells.

Levine-Fricke (1991b) conducted subsurface investigations at the Jalk Fee property between November 1990 and September 1991. The field investigations included a shallow methane gas survey, the excavation of shallow trenches in the former boneyard and eight former sump areas, and 27 shallow soil borings to depths ranging from 20 to 55 feet below grade. The selection of the trench and soil boring locations were based on information presented in the partial report prepared by WCC, discussions with Mobil personnel familiar with the site, and review of historical aerial photographs. The results from the investigation were presented in Levine-Fricke's (1991a) December 6, 1991, report and briefly summarized in Levine-Fricke's (1991b) December 18, 1991 report.

The results from Levine-Fricke's (1991a) subsurface investigation indicated that only 10 of the 21 areas investigated had chemicals in soil. The southeast portion of the Jalk Fee property contained up to 2,500 parts per million (ppm) tetrachloroethylene (PCE) and other chlorinated compounds. Petroleum hydrocarbons (C5-C30) up to 29,000 ppm were also detected, using EPA Method 8015 Modified, in soil at this location. Based on the analytical results from soil samples collected from soil boring SB-3, Levine-Fricke (1991a) estimated that PCE-affected soil extends vertically from ground surface to approximately 20 feet below ground surface at this location (Levine-Fricke, 1991a). PCE was also detected in one surface sample obtained along the northern property boundary in the western portion of the site (near SB-17) at a concentration of 0.037 ppm.

Additionally, in a further attempt to identify possible sources of PCE and related compounds at the Jalk Fee site, McLaren/Hart reviewed the files of the southern neighboring property (Continental Heat Treating, Inc.) at the Environmental Compliance Section of the City of Santa Fe Springs. The results of this work are detailed in McLaren/Hart's September 23, 1993 letter entitled "Perchlorethylene (PCE) and Heavy Metals in Soil at the Jalk Lease". In summary, the file contained information indicating that the neighboring facility used PCE. An

average volume of 125 gallons and a maximum volume of 250 gallons of PCE were stored per day at the Continental Heat Treating, Inc. facility (February 15, 1993 Hazardous Material Registration Forms).

McLaren/Hart performed a subsurface investigation in the PCE Impacted Area. Results of this investigation are presented in a McLaren/Hart report entitled, "Limited Subsurface Investigation of Tetrachloroethylene (PCE) Impacted Soil at Mobil Jalk Fee Property, Santa Fe Springs, California", dated November 15, 1994. The results of the investigation indicated the following:

- Since the impacted soil containing the highest HVOC concentrations are confined to depths shallower than 20 feet, the source of the contamination probably resulted from surface spillage.

- Since normal crude oil production does not involve the use of PCE, it appears that the PCE originated from a non-oil production source.

- Vertical extent of the impacted soil below 30 foot depth has not been defined; PCE was detected in GP-15 at 48 feet (0.31 ppm) and appears to have impacted groundwater in nearby monitoring well MMW-5 at 2,100 parts per billion (ppb) (May 31, 1995).

- The source of PCE in the soil along the southern property boundary does not appear to be related to the operations conducted by Mobil on the property. It is probable that the source of PCE is from an off-site source.

- Oil production activities on site has impacted the soils with total recoverable petroleum hydrocarbons (TRPH) compounds near the concrete pad.

- Vertical and lateral extent of the TPH impacted soil has been defined as two small surface areas and one small subsurface area at 15 feet below ground surface.

1.4 HYDROGEOLOGIC SETTING

The Santa Fe Springs Oil Field is located on the Santa Fe Springs plain, which is part of the Montebello Forebay non-pressure area of the Central Basin. Groundwater is found throughout the region under unconfined conditions in the Recent Alluvium and in the underlying Exposition Aquifer. Numerous other aquifers are also present in the area, and are under confined to semi-confined conditions: the Gage, Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside Aquifers. Within the Santa Fe Springs Oil Field, the upper 100 feet of sediments consist predominantly of permeable sands, although the upper 15 feet of sediments have a higher silt and clay content and lower permeability. According to geologic cross-sections presented in California Department of Water Resources (CDWR) Bulletin 104 (1988), the first regional groundwater-bearing zone is the Exposition Aquifer, which is first encountered at approximately 60 feet below grade. The second regional aquifer is the Gage Aquifer, first encountered at approximately 110 feet below ground surface, according to geologic cross-sections presented in CDWR (1988).

The depth to first groundwater in the area of the oil field has generally been reported at approximately 60 feet below grade, although localized perched zones have been encountered as shallow as 13 feet below grade. Information from the Los Angeles County Department of Public Works (LACDPW)-Hydrologic Records section indicates that the depth to water at well number 1625-N (located at the intersection of Telegraph Road and the Southern Pacific Railroad tracks approximately two-thirds of a mile northwest of the Jalk Fee property) was 58 feet below grade on April 30, 1992. The occurrences of groundwater at approximately 60 feet below grade correspond to the top of the saturated portion of the Exposition Aquifer. The regional, horizontal groundwater flow direction in both the Exposition and Gage Aquifers in the Santa Fe Springs Oil Field ranges from the south to southwest.

Although most of the aquifers in the area are separated by aquicludes, the Hollydale and Gage are hydraulically connected approximately 2,000 feet north of the intersection of Telegraph Road and Norwalk Boulevard. Approximately 7,200 feet north of the intersection of Telegraph Road and Norwalk Boulevard, the Hollydale, Jefferson, and Lynwood are also hydraulically connected. There are domestic and commercial water wells screened in the Lynwood and Silverado (250 to 780 feet below grade) throughout the city.

Significant hydrologic features in the area include the San Gabriel River, which flows approximately north-south along the western edge of the city. There are also two extensive water spreading grounds/percolation basins approximately 1 to 2.5 miles northwest of the city limits. These features will act as groundwater recharge, or "mounding" areas, thus inducing groundwater to flow away from them.

Soil at the site consists of interbedded sand, silty sand, sandy silt, silt , and clayey silt in the upper 40 feet. Sandy soils are loose to dense and silty soils are slightly stiff to hard. A very tight, dry, silt is located approximately 15 feet below grade and two very tight, dry, clayey silt layers are located at 23 and 29 feet below grade. These layers exist throughout most of the investigated area. Perched groundwater was found at 5 to 10 feet below grade in small quantities near the concrete pad.

2.0 FIELD INVESTIGATION

2.1 PRE-FIELD INVESTIGATION

Prior to starting the field activities, an existing health and safety plan was modified to include the work that was to be performed at the site. All soil boring locations were identified and a utility clearance was performed by a McLaren/Hart Engineer. Underground Service Alert was notified 48 hours prior to starting work as required by State law. Additional pre-field activities included the scheduling and contracting of subcontractors, preparing field equipment, and marking the soil boring locations.

All soil samples were collected in accordance with McLaren/Hart's standard protocols for sampling soil using a hand auger, Geoprobe, and hollow-stem auger drill rig (Appendix A). All samples collected were sent to MBT Environmental Laboratory, a State-certified hazardous waste testing laboratory. All soil cuttings and decontamination water generated during the drilling activities were placed in DOT approved 55-gallon drums and stored on-site pending analytical results. Following the receipt of analytical results which were necessary for the profiling of the soil cuttings and decontamination water, all waste generated during the soil investigation was disposed of at a Mobil-approved facility.

2.2 FIELD INVESTIGATION

McLaren/Hart's additional soil sampling investigation consisted of advancing a total of 17 Geoprobes, 20 hand augers, 2 soil borings (drilled by hollow stem auger), and 9 soil gas probes. The field investigation was performed between December 18 and 29, 1995. A summary of the proposed scope of work, for the soil sampling activities, is included in Table 1. The following sections describe the approach and methods used to complete this investigation.

2.2.1 Task 1 - Oil Production Well and Tank Battery

McLaren/Hart's proposed scope of work for the Task 1 included advancing one Geoprobe boring (MH-4) in the vicinity of Oil Well #112 and along the eastern perimeter of the Tank Battery. The location of Oil Well #112 is shown on Figure 2. Soil samples were collected from depths of 5 and 10 feet below ground surface (bgs) and analyzed for BTEX and TPH using EPA Methods 8020 and 8015 Modified, respectively. Soil samples were also collected from depths of 20, 30, and 40 feet bgs and analyzed for VOCs using EPA Method 8240. These analyses were performed to further evaluate the presence of VOCs at depth in the area. Collection and analysis of these soil samples from MH-3 would have been preferable since MH-3 is closer to the VOCs detected by Levine-Fricke in 1991. However, due to subsurface obstructions, refusal was encountered in MH-3 at 2 feet below ground surface (bgs). Soil boring logs, for borings greater than 20 feet bgs, are included in Appendix B.

In addition, three Geoprobe borings (MH-2, -5, and -6) were advanced along the northern and southern perimeters of the Tank Battery. The location of the Tank Battery is shown on Figure 2. In MH-2, soil samples were collected from depths of 5 and 10 feet below ground surface (bgs) and analyzed for TPH and VOCs using EPA Methods 8015 Modified and 8240, respectively. BTEX compounds could have been analyzed using EPA Method 8020; however, EPA Method 8240 was selected since it provided information on both BTEX and chlorinated compounds (such as those identified by Levine-Fricke in 1991). In MH-5 and -6, soil samples were collected from depths of 5 and 10 feet bgs and analyzed for BTEX and TPH using EPA Methods 8020 and 8015 Modified, respectively.

2.2.2 Task 2 - Bioremediation Cell Closure Sampling

McLaren/Hart's proposed scope of work for the Task 2 included advancing twenty hand auger borings at the former Bioremediation Cells #1 and #2 (13 soil samples from Cell #1 [see Figure 3] and 7 soil samples from Cell #2 [see Figure 4]). Soil samples were collected from a depth of 0.5 feet bgs and analyzed for BTEX and TPH using EPA Methods 8020 and 8015 Modified, respectively.

2.2.3 Task 3 - Northwest Perimeter, Northeast Perimeter, PCE Impacted Area, and Former Trucking Operations Area

Northwest and Northeast Perimeters - This work involved advancing three Geoprobe borings (MH-7, -8, and -9), along the Northwest Perimeter of the property; and advancing two Geoprobe borings (MH-10 and -11) along the Northeast Perimeter of the property (see Figure 2). In MH-7, soil samples were collected from a depth of 5 and 10 feet bgs. Soil samples were collected at 1 and 5 feet bgs in borings MH-8 and MH-9. In MH-10 and MH-11, soil samples were collected from a depth of 1, 5, and 10 feet bgs. Soil samples collected along the Northwest and Northeast Perimeters were analyzed for TPH and VOCs using EPA Methods 8015 Modified and 8240, respectively.

PCE Impacted Area - McLaren/Hart advanced six Geoprobe borings (GP-19 through -24) to a depth of 40 feet bgs outside the suspected fringe of the HVOC plume. The location of the PCE Impacted Area is shown on Figure 2. Soil samples were collected at five foot intervals and analyzed for HVOCs using EPA Method 8010. McLaren/Hart also advanced two soil borings (MB-1 and MB-2) to 60 feet bgs in the areas with the highest recorded concentrations of PCE. These borings were advanced to assess the vertical extent of the HVOC plume. Soil samples, in these borings, were collected at five foot intervals beginning at 25 feet bgs and analyzed for HVOCs using EPA Method 8010. Additionally, a continuous "Macro" sample was collected, using the Geoprobe, in the central portion of the PCE Impacted area. The sample was collected in transparent acetate liners and was used to log, in detail, the soil conditions in this area to a depth of 42 feet bgs. The macro sample was capped and archived for future reference. The macro sample showed interbedded sand, silty sand, sandy silt, silt , and clayey silt in the upper 40 feet. Sandy soils varied from loose to dense and silty soils varied from slightly stiff to hard. This type lithologic stratification lends to chemical compounds behaving erratically in the subsurface (i.e. varying directions and extent based on preferential flow paths). Six silt layers were observed in the Macro sample. One silt layer was identified from 15.5 to 16 feet bgs, two clayey silt layers were identified from 23 to 24 and 29 to 30 feet bgs, and three successive silt layers were identified from 30 to 33, 33 to 34.5, and 34.5 to 37 feet bgs. Soil boring logs, for borings greater than 20 feet bgs, are included in Appendix B.

Former Trucking Operations Area - An aerial photograph review of the Jalk Fee Property was performed to locate any historic activities (on-site or immediately off-site) which may be considered potential areas of concern. The results of the aerial photograph review are summarized in a letter report included as Appendix C. One of the primary purposes of the aerial photograph review was to verify the location of the Former Trucking Operations on the Jalk Fee Property. The location of the Former Trucking Operations are shown on Figure 2 (the area of Task 3 in the central portion of the property). Based on the information gathered from the aerial photograph review, nine soil gas probe locations were placed in a 3 by 3 grid with 50 foot spacing in the area identified (from the aerial photograph review) as the location of the Former Trucking Operations. McLaren/Hart advanced nine soil gas probes to depths of 5 and 10 feet bgs. Soil gas samples were collected at each interval and analyzed on-site for HVOCs using EPA Method 8010.

3.0 RESULTS

3.1 TASK 1 - OIL PRODUCTION WELL AND TANK BATTERY

Petroleum hydrocarbons in the C22-C32 (Motor Oil) range were detected at a concentration of 13 ppm in MH-2 at 10 feet bgs. No other compounds were detected in this area. Analytical results for the additional soil sampling activities for Task 1 are summarized in Table 2 and Figure 5. Chain-of-Custody forms and laboratory data sheets are included in Appendix D.

3.2 TASK 2 - BIOREMEDIATION CELL CLOSURE SAMPLING

Petroleum hydrocarbons in the C12-C22 (Diesel Fuel) range were detected at a concentration of 23 ppm in soil sample Cell 40 (Cell #1, Figure 3). Petroleum hydrocarbons in the C22-C32 (Motor Oil) range were detected at concentrations ranging from 55 to 700 ppm in soil samples collected from Cell #1 (Figure 3) and ranging from 11 to 4,600 ppm in soil samples collected from Cell #2. No other compounds were detected in this area. Analytical results for the additional soil sampling activities for Task 2 are summarized in Table 3. Chain-of-Custody forms and laboratory data sheets are included in Appendix D.

3.3 TASK 3 - NORTHWEST PERIMETER, NORTHEAST PERIMETER, PCE IMPACTED AREA, AND FORMER TRUCKING OPERATIONS AREA

Petroleum hydrocarbons in the C22-C32 (Motor Oil) range were detected at concentrations ranging from 85 to 1,600 ppm in soil samples collected along the Northwest and Northeast Perimeters. No other compounds were detected in this area. Analytical results for the additional soil sampling activities for Northwest and Northeast Perimeter are summarized in Table 4 and Figures 5 and 6. Chain-of-Custody forms and laboratory data sheets are included in Appendix D.

HVOCs were detected in the samples collected in the PCE Impacted Area. The HVOC *cis*-1,2-Dichloroethene (*cis*-1,2-DCE) was detected in several locations at concentrations ranging from 10 to 970 parts per billion (ppb). The chemical *trans*-1,2-Dichloroethene (*trans*-1,2-DCE) was detected in GP-23 at 5 feet bgs and GP-24 at 15 feet bgs at concentrations of 12 and 160 ppb, respectively. Trichloroethene (TCE) was detected in several locations at concentrations ranging from 10 to 180 parts per billion (ppb). PCE was detected in several locations at concentrations ranging from 10 to 4,100 parts per billion (ppb). Analytical results for the additional soil sampling activities for the PCE Impacted Area are summarized in Table 5. Figures 7 through 14 illustrate the potential extent of the HVOC plume at the five foot intervals, respectively. Chain-of-Custody forms and laboratory data sheets are included in Appendix D.

HVOCs were detected in the samples collected in the area of the Former Trucking Operations. PCE was detected in SG-4 at 10 feet bgs and SG-8 at 5 feet bgs at concentrations of 3 and 1 ppb, respectively. Analytical results for the additional soil sampling activities for the Former Trucking Operations area are summarized in Table 6 and Figure 15. Results of the Soil Gas Survey are included in Appendix E.

4.0 CONCLUSIONS AND RECOMMENDATIONS

For the purpose of this evaluation, McLaren/Hart used the Regional Water Quality Control Board's "Interim Guidance Cleanup Criteria" Level B (based on depth to groundwater) for petroleum hydrocarbons and associated VOCs. For the compounds not contained in the guidance document, McLaren/Hart used 10 times the MCL (based on Marshack, 1995) as the screening criteria for soil. Based on similar projects these soil screening criterion have been considered acceptable.

4.1 TASK 1 - OIL PRODUCTION WELL AND TANK BATTERY

No petroleum hydrocarbons were detected above the Regional Water Quality Control Board's (RWQCB) "Interim Guidance Cleanup Criteria". Based on the results of this investigation and the review of previous investigations, it is McLaren/Hart's recommendation that no further remedial investigation be performed around the perimeter of the Tank Battery or Oil Production Well.

4.2 TASK 2 - BIOREMEDIATION CELL CLOSURE SAMPLING

No petroleum hydrocarbons were detected above the RWQCBs "Interim Guidance Cleanup Criteria". No BTEX compounds were detected in this area. Based on the results of this investigation and the review of previous investigations, it is McLaren/Hart's opinion that bioremediation activities did not adversely impact the surface soil beneath the bioremediation cells; no further investigations are necessary.

4.3 TASK 3 - NORTHWEST PERIMETER, NORTHEAST PERIMETER, PCE IMPACTED AREA, AND FORMER TRUCKING OPERATIONS AREA

Northwest and Northeast Perimeters - No petroleum hydrocarbons were detected along the

Northwest and Northeast Perimeter above the RWQCBs "Interim Guidance Cleanup Criteria". No VOCs were detected in this area. Based on the results of this investigation and the review of previous investigations, it is McLaren/Hart's recommendation that no further remedial investigation be conducted for along the Northwest Perimeter. Based on the information gathered by Levine-Fricke along the Northeast Perimeter, McLaren/Hart collected verification samples to determine the extent of the TPH impacted soil. However, the data collected by Levine-Fricke was not reproducible. Based on the results of this investigation and the review of previous investigations, it is McLaren/Hart's recommendation that no further remedial investigation be performed along the Northeast Perimeter.

PCE Impacted Area - The HVOCs *cis*-1,2-DCE, *trans*-1,2-DCE, TCE, and PCE were detected in the vicinity of the HVOC plume. Hence, the plume appears to be of greater lateral and vertical extent than its initial estimate. Based on the Macro sample and the distribution of the HVOC plume, a correlation can be made between the finer grained soil material and the lateral distribution of the HVOC plume. The plume has the greatest lateral distribution in the finer grained soils (silts) and has smallest distribution in the coarser grained soils (sands). Based on the findings that the use of PCE is not consistent with normal oil field operations and that PCE was, in fact, used at locations adjacent to the Jalk Fee Property, it is McLaren/Hart's recommendation that the RWQCB take whatever actions are necessary to determine the factual origin of the PCE contamination and order the responsible parties to take the necessary appropriate actions. In any event, McLaren/Hart finds no further investigations of the Jalk Fee Property by Mobil are necessary.

Former Trucking Operations Area - PCE vapors were detected at low concentrations in the soil in the vicinity of the Former Trucking Operations area. These results indicated that the subsurface soils appear not to have been impacted by the former operations in this area. Hence, it is McLaren/Hart's recommendation that no further remedial investigation activities be conducted at this area.

5.0 REFERENCES

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Levine-Fricke. 1991a. Draft Subsurface Soil Investigation, Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California. Unpublished report dated December 6, 1991.

Levine-Fricke. 1991b. Draft Remedial Action Plan, Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California. Unpublished report dated December 18, 1991.

McLaren/Hart. 1994. Limited Subsurface Investigation of Tetrachloroethylene (PCE) Impacted Soil at Mobil Jalk Fee Property, Santa Fe Springs, California. Unpublished report dated November 15, 1994.

Tables

Table 1
Summary of Proposed Additional Soil Sampling

Mobil Jalk Fee Property, Santa Fe Springs, California

Area of Interest	Chemicals of Interest	Justification	Investigation Approach	Number of Sampling Points	Approximate Sample Depths (ft)	Analysis
Task 1 Oil Production Well #112	VOC	The purpose of the additional investigation would be verify the presence of the compounds only. Determination of lateral and vertical extent is not included in this scope of work.	GeoProbe	1	5, 10, 20, 30, 40	8240[1] (MH-3 or -4)
Task 1 Tank Battery	TPH	Determine the presence of TPH compounds along the north, south, and east perimeter of the tank battery.	GeoProbe	5	5, 10, 15 - vertical depths (analyze up to two samples per boring)	8015[2] Modified 8020 (MH-4, -5, and -6) 8240 (MH-2 and -3)
Task 2 Collection of Closure Soil Samples	TPH VOC	1) To document remediation activities did not impact the native soil underlying the treatment cell.	Hand Auger	20	1	8015 Modified 8020
Task 3 Northwest Perimeter	VOC	Purpose of these borings are to assess the presence of TPH and VOC near locations SS-1, SS-3, and along fenceline next to the equipment repair yard.	GeoProbe	3	1, 5, 10, 15 (analyze up to two samples per boring)	8015 Modified 8240
Task 3 Northeast Perimeter	VOC TPH	Assess the vertical extent of impacted soil near locations SS-4 and SS-7.	GeoProbe	2	1, 5, 10, 15, 20, 25 (analyze up to three samples per boring)	8015 Modified 8240

1 EPA Method 8240
2 EPA Method 8015Modified (full carbon chain)

Table 2

Soil Sample Analytical Results for Oil Production Well and Tank Battery (Task 1)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8020 (parts per billion, ppb)						EPA Method 8015 Modified (parts per million, ppm)				EPA Method 8240 (ppb)	EPA Method 8010 (ppb)
			Benzene	Toluene	Ethylbenzene	1,2-Xylene	1,3-Xylene	1,4-Xylene	Gasoline Range (C4-C12)	Diesel Range (C12-C22)	Motor Oil Range (C22-C32)	Heavy Hydrocarbon Range (C32-C40)	VOCs	HVOCS
MH-2	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-2	10	12/21/95	--	--	--	--	--	--	<10	<10	13	<10	BRL	--
MH-4	5	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
MH-4	10	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
MH-4	20	12/21/95	--	--	--	--	--	--	--	--	--	--	BRL	--
MH-4	30	12/21/95	--	--	--	--	--	--	--	--	--	--	BRL	--
MH-4	40	12/21/95	--	--	--	--	--	--	--	--	--	--	BRL	--
MH-5	5	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
MH-5	10	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
MH-6	5	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
MH-6	10	12/21/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
Screening Criteria			10[1]	1,500[1]	7,000[1]	17,500[1]	17,500[1]	17,500[1]	100	1,000	10,000		Various	NC

-- - Not Analyzed
BRL - Below Reporting Limit
NC - No Criteria

[1] - Cleanup criteria equals the maximum contaminant level (MCL) times 10

Created by: M. Williams
Reviewed by: E. Ferguson

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Table 3
Soil Sample Analytical Results for Bioremediation Cell Closure Sampling (Task 2)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8020 (parts per billion, ppb)						EPA Method 8015 Modified (parts per million, ppm)			
			Benzene	Toluene	Ethylbenzene	1,2-Xylene	1,3-Xylene	1,4-Xylene	Gasoline Range (C4-C12)	Diesel Range (C12-C22)	Motor Oil Range (C22-C32)	Heavy Hydrocarbon Range (C32-C40)
Cell 71	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	110	<10
Cell 59	1	12/19/95	<10	<10	<10	<10	<10	<10	<2000	<2000	4600	<2000
Cell 76	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	11	<10
Cell 80	1	12/19/95	<10	<10	<10	<10	<10	<10	<50	<50	110	<50
Cell 57	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cell 67	1	12/19/95	<10	<10	<10	<10	<10	<10	<500	<500	1100	<500
Cell 55	1	12/19/95	<10	<10	<10	<10	<10	<10	<500	<500	610	<500
Cell 27	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	65	<10
Cell 46	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	130	<10
Cell 25	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cell 2	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cell 30	1	12/19/95	<10	<10	<10	<10	<10	<10	<200	<200	700	<200
Cell 43	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cell 21	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cell 6	1	12/19/95	<10	<10	<10	<10	<10	<10	<50	<50	520	<50
Cell 12	1	12/19/95	<10	<10	<10	<10	<10	<10	<50	<50	460	<50
Cell 15	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	130	<10
Cell 17	1	12/19/95	<10	<10	<10	<10	<10	<10	<50	<50	630	<50
Cell 40	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	23	140	<10
Cell 4	1	12/19/95	<10	<10	<10	<10	<10	<10	<10	<10	55	<10
Screening Criteria			10[1]	1,500[1]	7,000[1]	17,500[1]	17,500[1]	17,500[1]	100	1,000	10,000	

[1] - Cleanup criteria equals the maximum contaminant level (MCL) times 10

Created by: M. Williams
Reviewed by: E. Ferguson

Table 4
Soil Sample Analytical Results for Northwest Perimeter and Northeast Perimeter (Task 3)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8020 (parts per billion, ppb)						EPA Method 8015 Modified (parts per million, ppm)				EPA Method 8240 (ppb)	EPA Method 8010 (ppb)
			Benzene	Toluene	Ethylbenzene	1,2-Xylene	1,3-Xylene	1,4-Xylene	Gasoline Range (C4-C12)	Diesel Range (C12-C22)	Motor Oil Range (C22-C32)	Heavy Hydrocarbon Range (C32-C40)	VOCs	HVOCS
MH-7	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-7	10	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-8	1	12/21/95	--	--	--	--	--	--	<500	<500	1600	<500	BRL	--
MH-8	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-9	1	12/21/95	--	--	--	--	--	--	<10	<10	85	<10	BRL	--
MH-9	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-10	1	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-10	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-10	10	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-11	1	12/21/95	--	--	--	--	--	--	<500	<500	820	<500	BRL	--
MH-11	5	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
MH-11	10	12/21/95	--	--	--	--	--	--	<10	<10	<10	<10	BRL	--
Screening Criteria			10[1]	1,500[1]	7,000[1]	17,500[1]	17,500[1]	17,500[1]	100	1,000	10,000		Various	NC

-- - Not Analyzed
BRL - Below Reporting Limit
NC - No Criteria

[1] - Cleanup criteria equals the maximum contaminant level (MCL) times 10

Created by: M. Williams
Reviewed by: E. Ferguson

Table 5
Soil Sample Analytical Results for PCE Impacted Area (Task 3)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8010 (ppb)				
			cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene	Other Halogenated Volatile Organic Compounds
GP-19	5	12/21/95	BRL	BRL	BRL	BRL	BRL
GP-19	10	12/21/95	BRL	BRL	BRL	BRL	BRL
GP-19	15	12/21/95	BRL	BRL	BRL	75	BRL
GP-19	20	12/21/95	BRL	BRL	BRL	12	BRL
GP-19	25	12/21/95	BRL	BRL	BRL	220	BRL
GP-19	30	12/21/95	BRL	BRL	BRL	78	BRL
GP-19	35	12/21/95	BRL	BRL	BRL	340	BRL
GP-19	40	12/21/95	BRL	BRL	BRL	110	BRL
GP-20	5	12/22/95	BRL	BRL	BRL	55	BRL
GP-20	10	12/22/95	BRL	BRL	BRL	BRL	BRL
GP-20	15	12/22/95	BRL	BRL	BRL	BRL	BRL
GP-20	20	12/22/95	BRL	BRL	BRL	10	BRL
GP-20	25	12/22/95	BRL	BRL	BRL	920	BRL
GP-20	30	12/27/95	BRL	BRL	BRL	480	BRL
GP-20	35	12/27/95	BRL	BRL	24	100	BRL
GP-20	40	12/27/95	BRL	BRL	BRL	23	BRL
GP-21	5	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-21	10	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-21	15	12/27/95	BRL	BRL	BRL	20	BRL
GP-21	20	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-21	25	12/27/95	BRL	BRL	BRL	170	BRL
GP-21	30	12/27/95	BRL	BRL	BRL	21	BRL
GP-21	35	12/27/95	BRL	BRL	40	560	BRL
GP-21	40	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	5	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	10	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	15	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	20	12/27/95	BRL	BRL	19	75	BRL
GP-22	25	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	30	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-22	35	12/27/95	20	BRL	41	BRL	BRL
GP-22	40	12/27/95	14	BRL	24	BRL	BRL
GP-23	5	12/27/95	11	12	50	BRL	BRL
GP-23	10	12/27/95	BRL	BRL	14	BRL	BRL

Table 5

Soil Sample Analytical Results for PCE Impacted Area (Task 3)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8010 (ppb)				
			cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene	Other Halogenated Volatile Organic Compounds
GP-23	15	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-23	20	12/27/95	BRL	BRL	BRL	BRL	BRL
GP-23	25	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-23	30	12/28/95	10	BRL	10	21	BRL
GP-23	35	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-23	40	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	5	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	10	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	15	12/28/95	110	160	180	BRL	BRL
GP-24	20	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	25	12/28/95	13	BRL	BRL	23	BRL
GP-24	30	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	35	12/28/95	BRL	BRL	BRL	BRL	BRL
GP-24	40	12/28/95	BRL	BRL	BRL	BRL	BRL
MB-1	25	12/29/95	BRL	BRL	BRL	4100	BRL
MB-1	30	12/29/95	BRL	BRL	BRL	700	BRL
MB-1	35	12/29/95	BRL	BRL	22	2000	BRL
MB-1	40	12/29/95	BRL	BRL	BRL	170	BRL
MB-1	45	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-1	50	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-1	55	12/29/95	BRL	BRL	BRL	55	BRL
MB-1	59	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-2	25	12/29/95	260	BRL	BRL	85	BRL
MB-2	30	12/29/95	970	BRL	76	260	BRL
MB-2	35	12/29/95	510	BRL	34	130	BRL
MB-2	40	12/29/95	15	BRL	BRL	BRL	BRL
MB-2	45	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-2	50	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-2	55	12/29/95	BRL	BRL	BRL	BRL	BRL
MB-2	59	12/29/95	BRL	BRL	BRL	BRL	BRL
Screening Criteria			60[1]	100[1]	50[1]	50[1]	Various

BRL - Below Reporting Limit

[1] - Cleanup criteria equals the maximum contaminant level (MCL) times 10

Created by: M. Williams
Reviewed by: E. Ferguson

Soil Gas Survey Analytical Results for Former Trucking Operations Area (Task 3)

Mobil Jalk Fee Property, Santa Fe Springs, California

Soil Boring Identification	Depth (feet)	Date Sampled	EPA Method 8010 (ppb)				
			cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene	Other Halogenated Volatile Organic Compounds
SG-1	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-1	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-2	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-2	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-3	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-3	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-4	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-4	10	1/2/96	BRL	BRL	BRL	3	BRL
SG-5	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-5	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-6	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-6	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-7	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-7	10	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-8	5	1/2/96	BRL	BRL	BRL	1	BRL
SG-8	8	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-9	5	1/2/96	BRL	BRL	BRL	BRL	BRL
SG-9	10	1/2/96	BRL	BRL	BRL	BRL	BRL

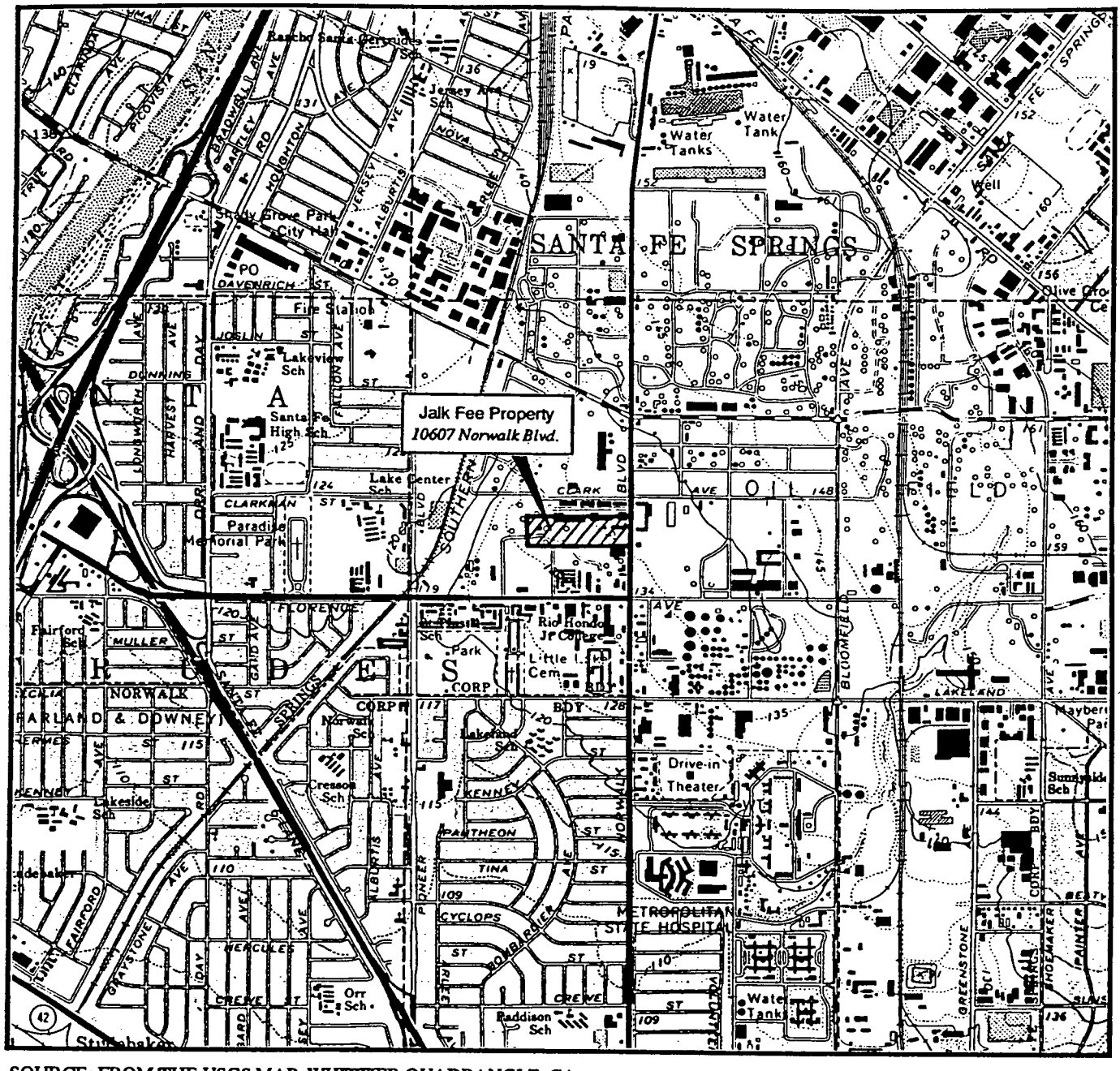
BRL - Below Reporting Limit

[1] - Cleanup criteria equals the maximum contaminant level (MCL) times 10

Created by: M. Williams

Reviewed by: E. Ferguson

FIGURE 1
SITE LOCATION MAP
JALK FEE PROPERTY
SANTA FE SPRINGS, CALIFORNIA



SOURCE: FROM THE USGS MAP. WHITTIER QUADRANGLE, CA.
7.5 MINUTE SERIES (TOPOGRAPHIC MAP) - 1965, PHOTO REVISED 1981

N

0 2,000'

SCALE

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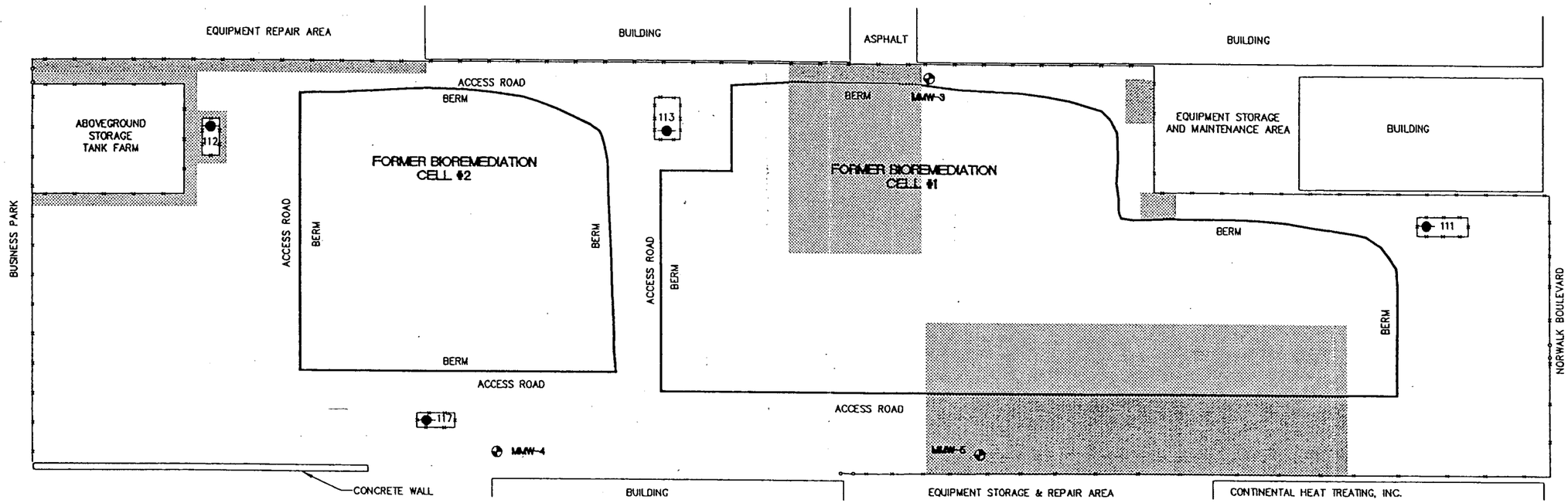
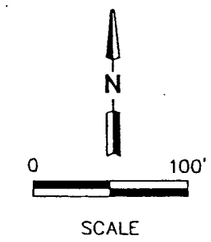




LEGEND

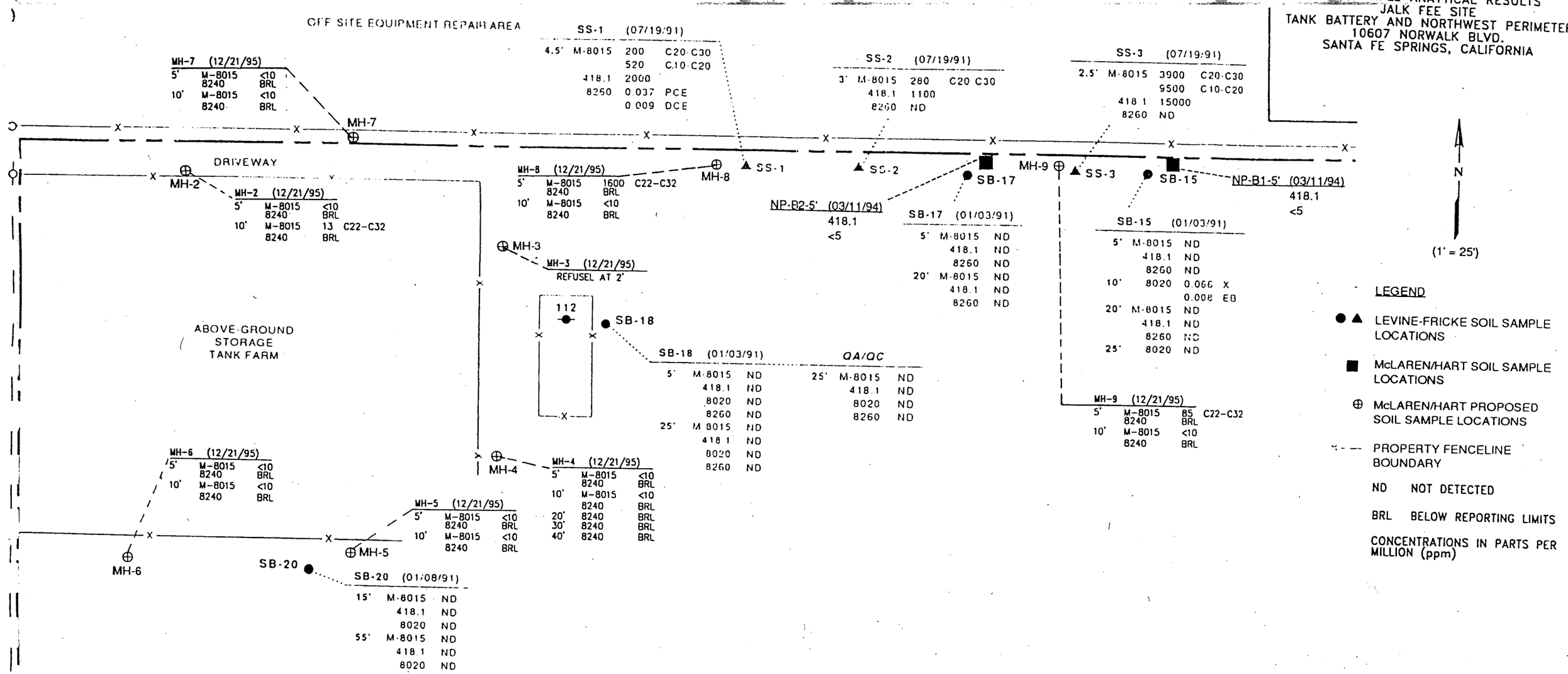
APPROXIMATE AREA OF BIOREMEDIATION CELL (4.37 ACRES)	AREA OF TASK 1
MW-4 GROUNDWATER MONITOR WELL LOCATION	AREA OF TASK 2
NOTES: SITE MAP MODIFIED FROM LEVINE-FRICKE (1991c).	
117 OPERATIONAL OIL WELL	AREA OF TASK 3
CHAIN LINK FENCE / GATE	AREA OF TASK 2 & 3

McLaren Hart
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL (714)756-2667 FAX (714) 756-8460

FIGURE 2
MOBIL JALK FEE SITE MAP
10607 NORWALK BOULEVARD
SANTA FE SPRINGS,
CALIFORNIA

DRAWN BY: E. Muresan	DATE: 10-5-94	PROJECT NAME: MOBIL	
CHECKED BY: E. Ferguson	DATE: 02/2/96	PROJECT NUMBER: 03.001382.000	
APPROVED BY: T. Bubier	DATE: 02/2/96	REVISION DATE: 02/1/96 vlb	DRAWING FILE 119F

FIGURE 5
SOIL SAMPLE ANAYTICAL RESULTS
JALK FEE SITE
TANK BATTERY AND NORTHWEST PERIMETER
10607 NORWALK BLVD.
SANTA FE SPRINGS, CALIFORNIA



LEGEND

- ● ▲ LEVINE-FRICKE SOIL SAMPLE LOCATIONS
- ■ McLAREN/HART SOIL SAMPLE LOCATIONS
- ⊕ McLAREN/HART PROPOSED SOIL SAMPLE LOCATIONS
- PROPERTY FENCELINE BOUNDARY

ND NOT DETECTED

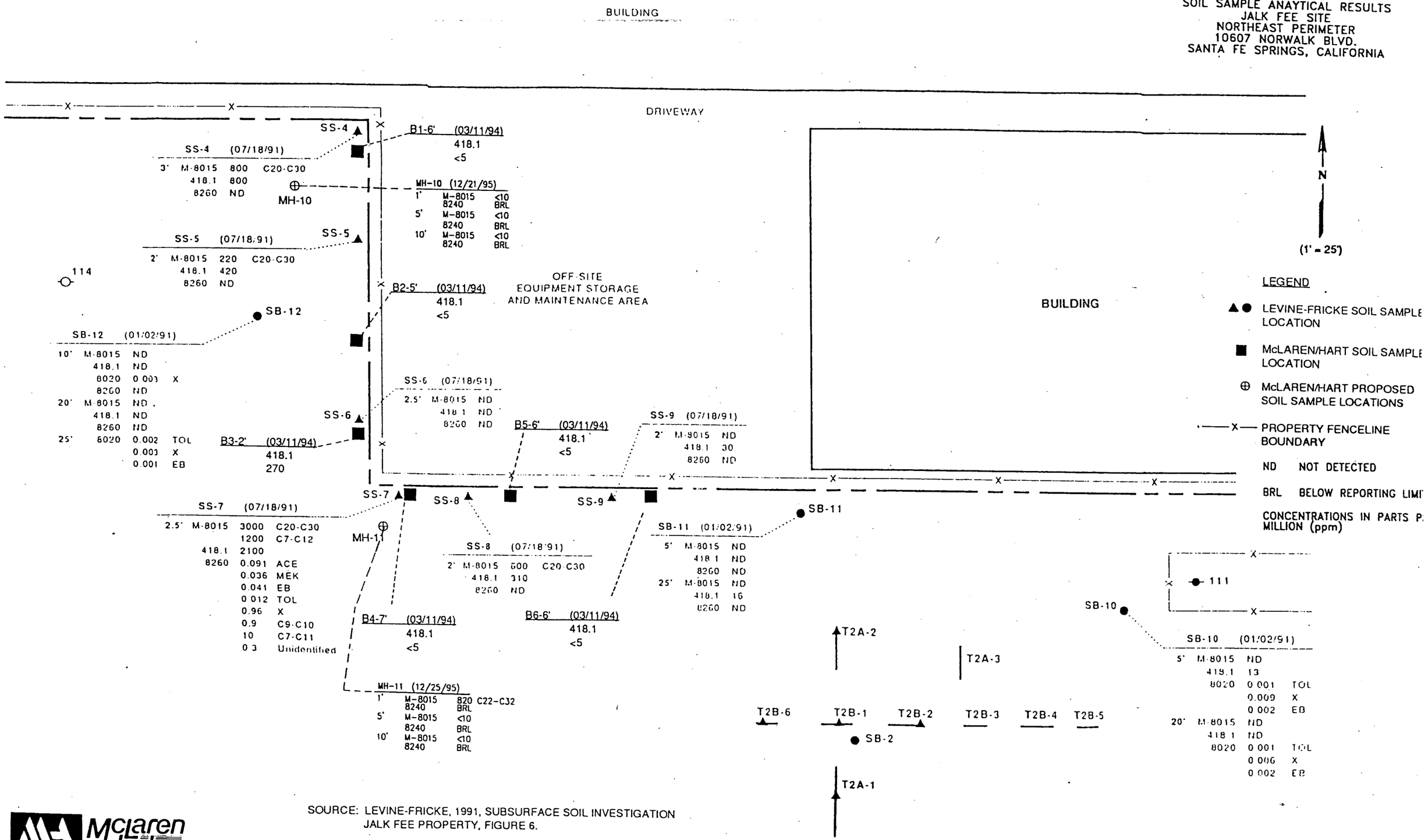
BRL BELOW REPORTING LIMITS

CONCENTRATIONS IN PARTS PER MILLION (ppm)

SOURCE: LEVINE-FRICKE, 199·
JALK FEE PROPERTY

McLaren Hart

FIGURE 6
SOIL SAMPLE ANAYTICAL RESULTS
JALK FEE SITE
NORTHEAST PERIMETER
10607 NORWALK BLVD.
SANTA FE SPRINGS, CALIFORNIA



SOURCE: LEVINE-FRICKE, 1991, SUBSURFACE SOIL INVESTIGATION
JALK FEE PROPERTY, FIGURE 6.

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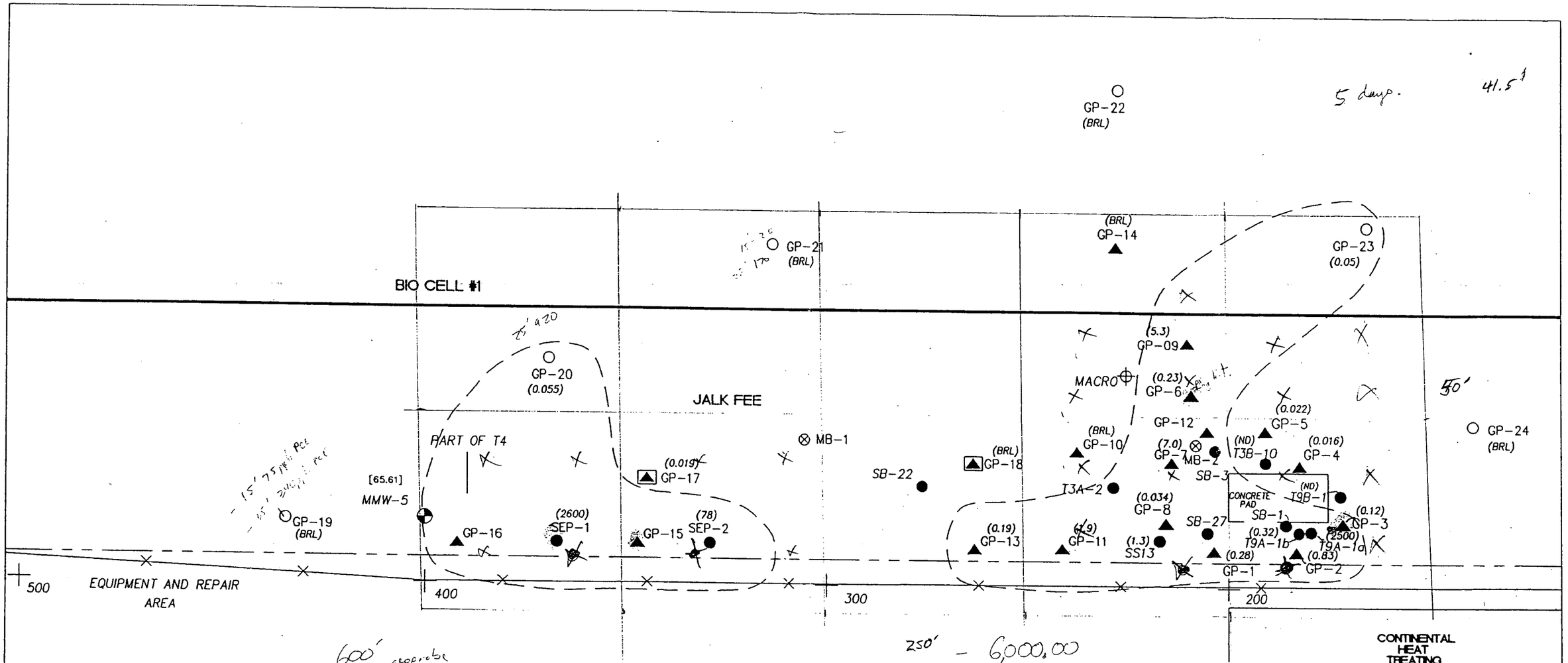

600' geoprobe

250' – 6,000.00

(310) 427-6549 – 3,750.00 geo probes

Joanne.

4×50'

20 geoprobes to 30' samples every 5'

6×30' 180

5× 90.00/hr

1080.00

LEGEND

PROPERTY LINE	
T4 — APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	
SB-22 ● SOIL BORING (LEVINE-FRICKE, DECEMBER 1991)	
MMW-5 ⊕ GROUNDWATER MONITOR WELL LOCATION	
○ GEOPROBE (McLAREN/HART, DECEMBER 1995)	
⊗ SOIL BORING (McLAREN/HART, DECEMBER 1995)	
[65.61] DEPTH TO GROUNDWATER IN FEET	
500+ SURVEYED MEASURED INTERVALS (100 FOOT)	
CHAIN LINK FENCE	
	GP-17 ▲ CONTINGENT GEOPROBE (McLAREN/HART, JULY-SEPTEMBER 1994)
	GP-14 ▲ GEOPROBE (McLAREN/HART, JULY-SEPTEMBER 1994)
	MACRO ⊕ MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
	(78) CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
	HVOC IMPACTED AREA (>0.05 ppm)
	BRL BELOW REPORTING LIMITS
	ND NOT DETECTED
	HVOC HALGENATED VOLATILE ORGANIC COMPOUNDS
	Note: All Concentrations are Reported in parts per million (ppm).

N

0 25'

APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE-FRICKE (1991b).

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16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL. (714)756-2667 FAX (714) 756-8460

FIGURE 7
HALOGENATED VOLATILE ORGANIC COMPOUNDS
AT 5 FEET BELOW GROUND SURFACE
MOBIL-JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94	PROJECT NAME:	
REVISED BY: V.B.	DATE: 1-25-96	MOBIL JALK FEE PCE	
CHECKED BY: E. Ferguson	DATE: 2-01-96	PROJECT NUMBER:	03.0601382.000
APPROVED BY: T. Bubier	DATE: 2-01-96	REVISION DATE: 7-01-96	DRAWING FILE 1 3-7

GP-22
(BRL)

GP-21
(BRL)

GP-14

GP-23
(0.014)

BIO CELL #1

GP-20
(BRL)

JALK FEE

GP-09

MACRO

(0.021)
GP-6

(0.014)
GP-12

(0.014)
GP-5

GP-24
(BRL)

MB-1

PART OF T4

GP-17

SB-22

GP-18

GP-10

(0.14)
GP-7

MB-2

T3B-T0

(0.061)
GP-4

SB-3

T3A-2

CONCRETE PAD (ND)

T9B-1

[BRL]
MMW-5

(0.17)
GP-8

SB-1

(0.08)
GP-3

GP-19
(BRL)

(0.35)
GP-16

SEP-1

(27000)
GP-15

SEP-2

SB-27

GP-13

GP-11

SS13

T9A-1b

T9A-1a

(0.12)
GP-1

(0.74)
GP-2

500

EQUIPMENT AND REPAIR AREA

400

300

200

CONTINENTAL HEAT TREATING

LEGEND

— — — —	PROPERTY LINE	GP-17 ▲	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4 ———	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14 ▲	GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
SB-22 ●	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO ⊕	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5 ◒	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
○	GEOPROBE (McLAREN/HART, DECEMBER 1995)	⬭	HVOC IMPACTED AREA (>0.05 ppm)
⊗	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500+	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
——×——×——	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).

N

0 25'

APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE–FRICKE (1991b).

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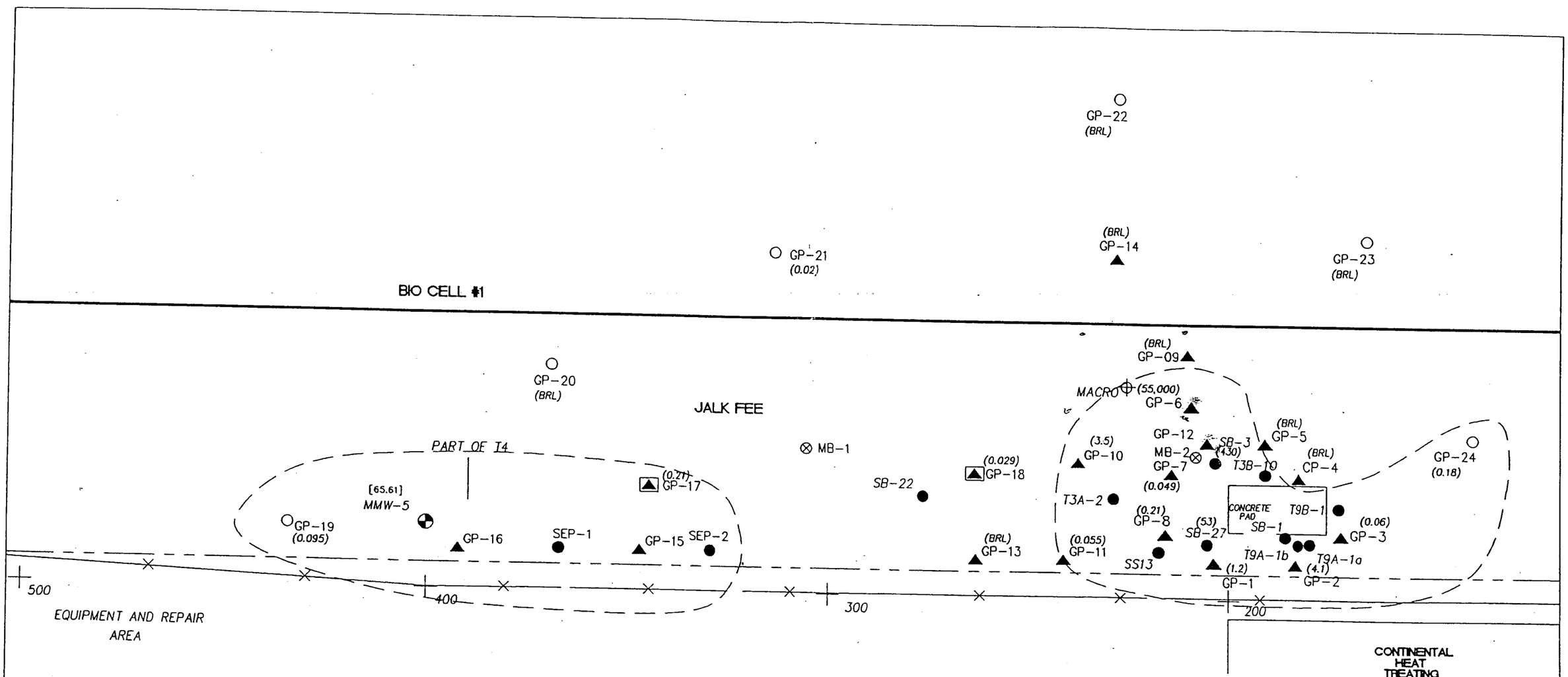
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL. (714)756–2667 FAX (714) 756–8460

FIGURE 8
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 10 FEET BELOW GROUND SURFACE
MOBIL–JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9–26–94	PROJECT NAME:	
REVISED BY: V.B.	DATE: 1–26–96	MOBIL JALK FEE PCE	
CHECKED BY: E. Ferguson	DATE: 2–01–96	PROJECT NUMBER: 03.0601382.000	
APPROVED BY: T. Bubier	DATE: 2–01–96	REVISION DATE: 7–1–96	DRAWING FILE #: 4–8



LEGEND

— — — —	PROPERTY LINE	GP-17 ▲	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4 ———	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14 ▲	GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
SB-22 ●	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO ⊕	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5 ◒	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
○	GEOPROBE (McLAREN/HART, DECEMBER 1995)	⬭	HVOC IMPACTED AREA (>0.05 ppm)
⊗	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500 +	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
—×—×—	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).

N

0 25'

APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE–FRICKE (1991b).

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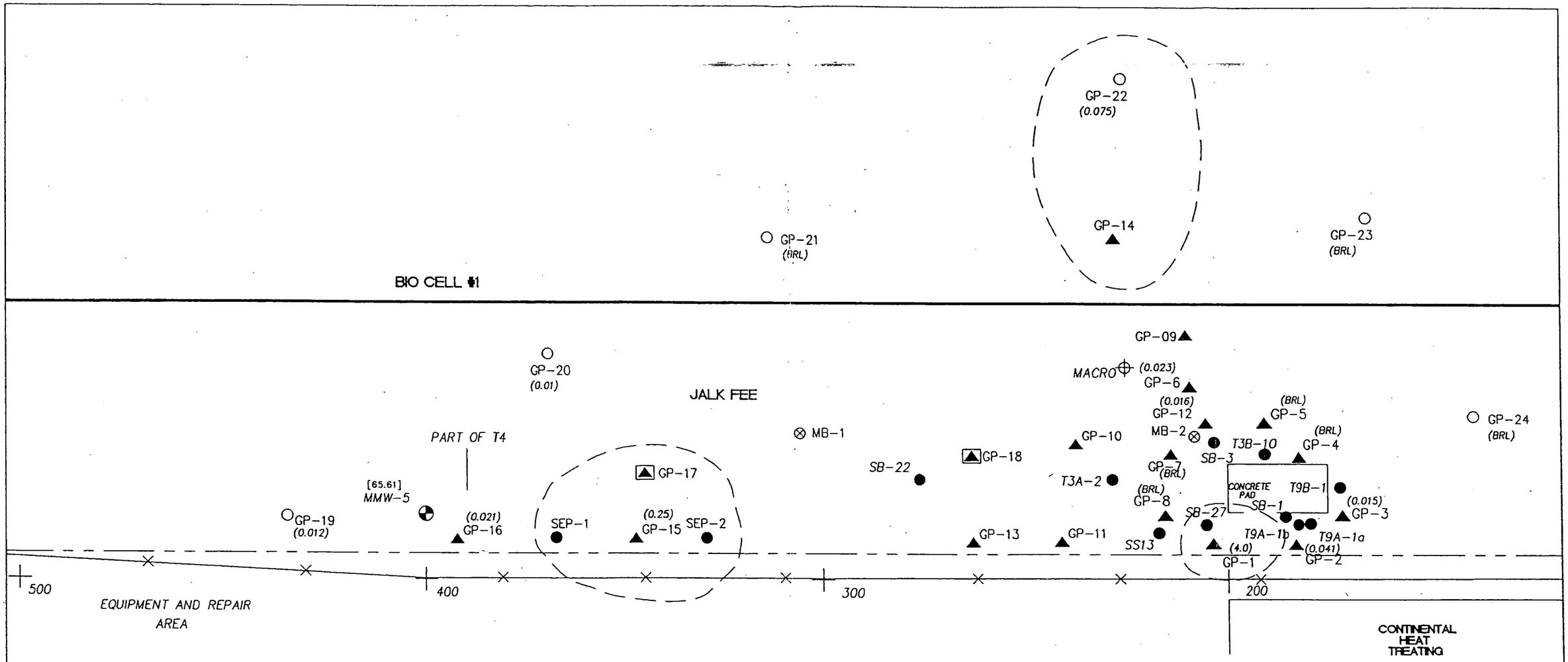
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL. (714)756–2667 FAX (714) 756–8460

FIGURE 9
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 15 FEET BELOW GROUND SURFACE
MOBIL–JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94	PROJECT NAME:	
REVISED BY: V.B.	DATE: 01-29-96	MOBIL JALK FEE PCE	
CHECKED BY: E. Ferguson	DATE: 2-01-96	PROJECT NUMBER:	03.0601382.000
APPROVED BY: T. Bubier	DATE: 2-01-96	REVISION DATE: 7-1-96	DRAWING FILE #: 5-9



LEGEND

— — —	PROPERTY LINE	GP-17 ▲	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4 ———	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14 ▲	GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
SB-22 ●	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO ⊕	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5 ◒	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
○	GEOPROBE (McLAREN/HART, DECEMBER 1995)	⬭	HVOC IMPACTED AREA (>0.05 ppm)
⊗	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500+	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
——x——x——	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).

N

0 25'

APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE-FRICKE (1991b).

McLaren Hart
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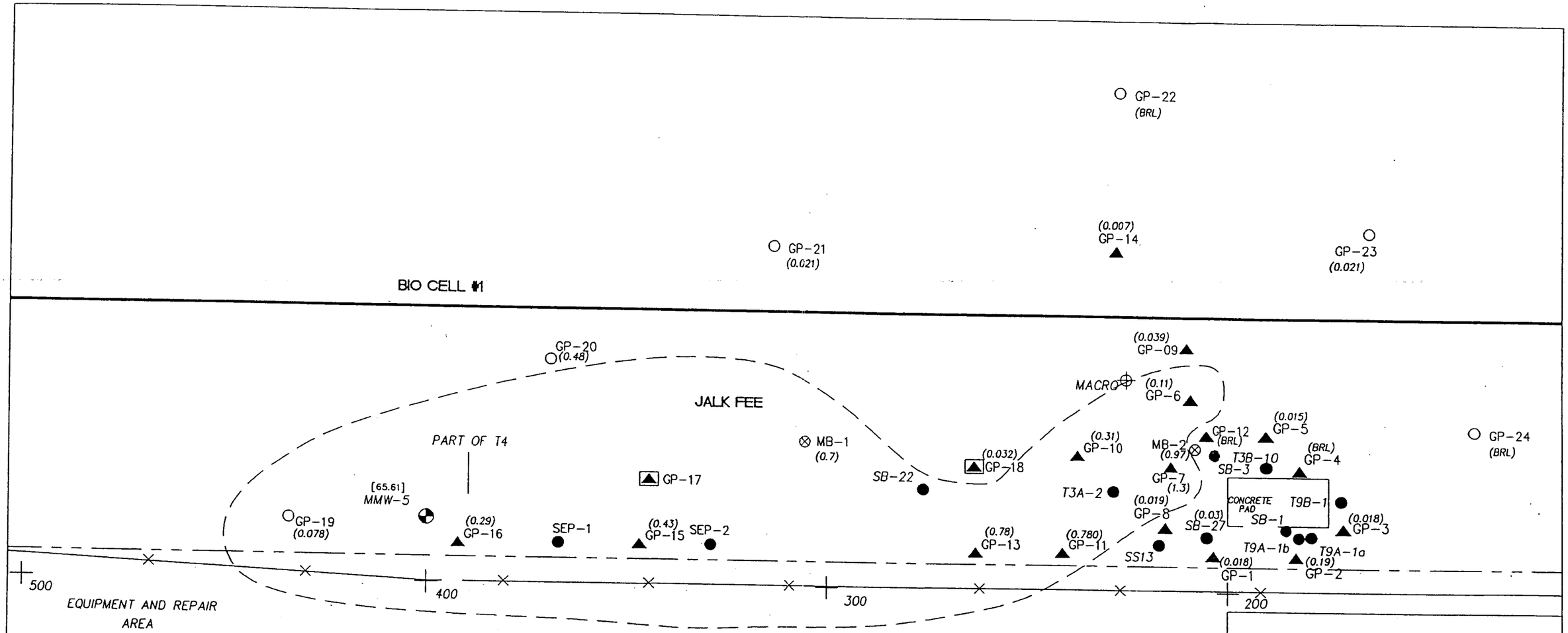
TEL. (714)756-2667 FAX (714) 756-8460

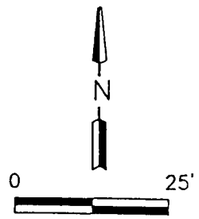
FIGURE 10
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 20 FEET BELOW GROUND SURFACE
MOBIL-JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94	PROJECT NAME:	
REVISED BY: V.B.	DATE: 01-29-96	MOBIL JALK FEE PCE	
CHECKED BY: E. Ferguson	DATE: 2-01-96	PROJECT NUMBER: 03.0601382.000	
APPROVED BY: T. Bubier	DATE: 2-01-96	REVISION DATE: 7-2-96	DRAWING FILE #: 6-10



LEGEND

	PROPERTY LINE	GP-17 ▲	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14 ▲	GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
SB-22 ●	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO ⊕	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5 ◔	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
○	GEOPROBE (McLAREN/HART, DECEMBER 1995)		HVOC IMPACTED AREA (>0.05 ppm)
⊗	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500+	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).



APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE–FRICKE (1991b).

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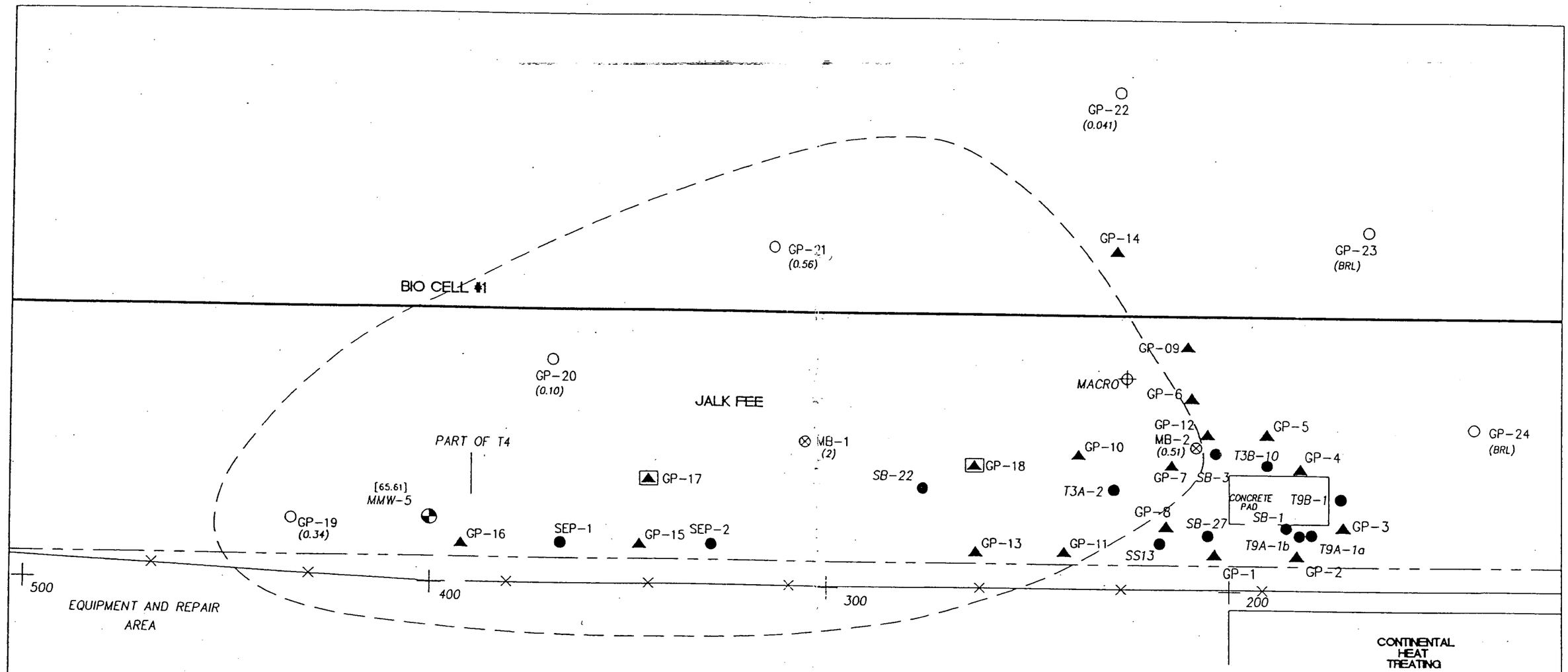
FIGURE 12
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 30 FEET BELOW GROUND SURFACE
MOBIL–JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94		PROJECT NAME:
REVISED BY: V.B.	DATE: 01-29-96		MOBIL JALK FEE PCE
CHECKED BY: E. Ferguson	DATE: 2-01-96		PROJECT NUMBER: 03.0601382.000
APPROVED BY: T. Bubier	DATE: 2-1-96	REVISION DATE: 7-2-96	DRAWING FILE # 8-12



LEGEND

	PROPERTY LINE	GP-17	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14	GEOPROBE (McLAREN/HART, JULY–SEPTEMEER 1994)
SB-22	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
	GEOPROBE (McLAREN/HART, DECEMBER 1995)		HVOC IMPACTED AREA (>0.05 ppm)
	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500 +	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).

N

0 25'

APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE–FRICKE (1991b).

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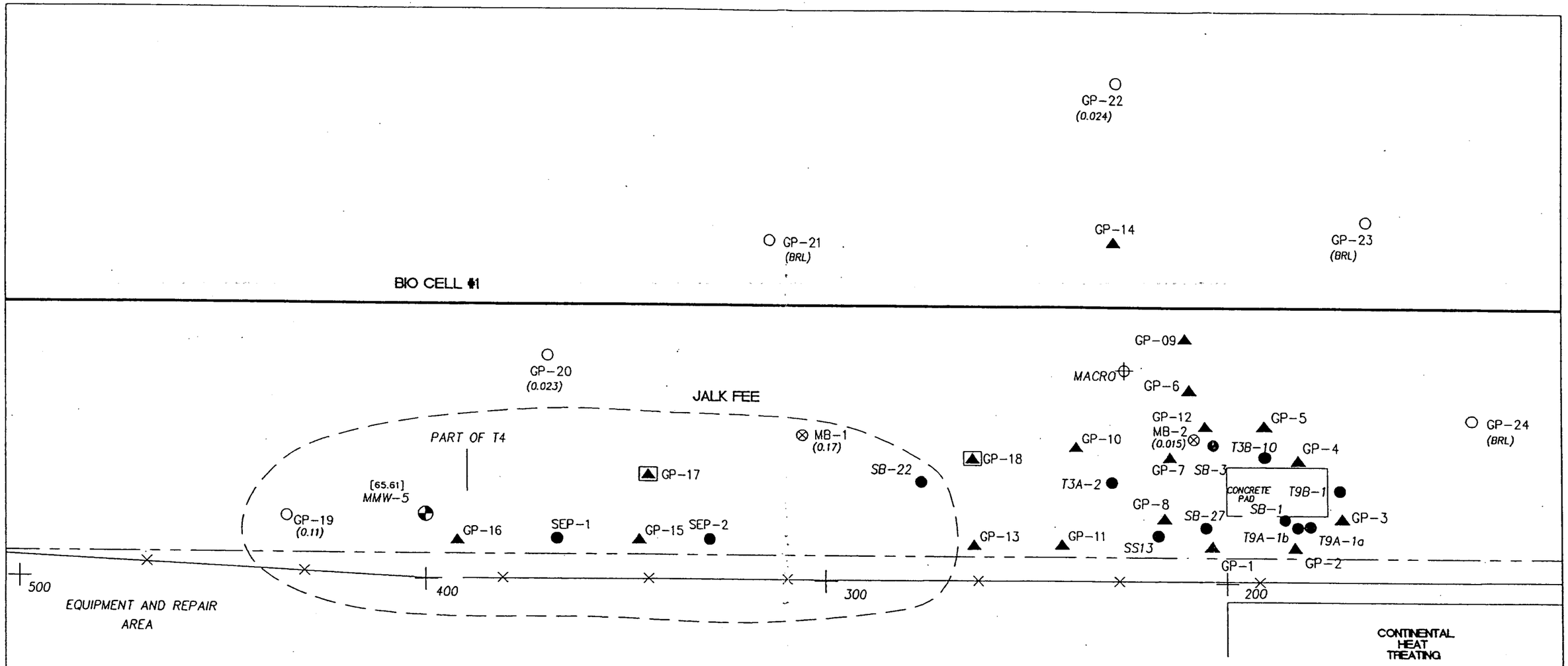
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL. (714)756–2667 FAX (714) 756–8460

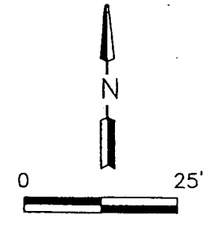
FIGURE 13
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 35 FEET BELOW GROUND SURFACE
MOBIL–JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94		PROJECT NAME:
REVISED BY: V.B.	DATE: 01-29-96		MOBIL JALK FEE PCE
CHECKED BY: E. Ferguson	DATE: 2-2-96		PROJECT NUMBER: 03.0601382.000
APPROVED BY: T. Bubier	DATE: 2-2-96	REVISION DATE: 7-1-96	DRAWING FILE # 9–13



LEGEND

———	PROPERTY LINE	GP-17 ▲	CONTINGENT GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
T4 ———	APPROXIMATE LOCATION OF EXPLORATORY TEST PIT	GP-14 ▲	GEOPROBE (McLAREN/HART, JULY–SEPTEMBER 1994)
SB-22 ●	SOIL BORING (LEVINE–FRICKE, DECEMBER 1991)	MACRO ⊕	MACRO SAMPLE (McLAREN/HART, DECEMBER 1995)
MMW-5 ◓	GROUNDWATER MONITOR WELL LOCATION	(78)	CONCENTRATION OF HIGHEST DETECTED SOLVENT COMPOUND
○	GEOPROBE (McLAREN/HART, DECEMBER 1995)	⬭	HVOC IMPACTED AREA (>0.05 ppm)
⊗	SOIL BORING (McLAREN/HART, DECEMBER 1995)	BRL	BELOW REPORTING LIMITS
[65.61]	DEPTH TO GROUNDWATER IN FEET	ND	NOT DETECTED
500+	SURVEYED MEASURED INTERVALS (100 FOOT)	HVOC	HALGENATED VOLATILE ORGANIC COMPOUNDS
——×——×——	CHAIN LINK FENCE	Note:	All Concentrations are Reported in parts per million (ppm).



APPROX. SCALE

NOTES: SITE MAP MODIFIED FROM LEVINE–FRICKE (1991b).

McLaren Hart
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL. (714)756–2667 FAX (714) 756–8460

FIGURE 14
HALOGENATED VOLATILE ORGANIC COMPOUNDS AT 40 FEET BELOW GROUND SURFACE
MOBIL–JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

DRAWN BY: E.M.	DATE: 9-26-94	PROJECT NAME:	
REVISED BY: V.B.	DATE: 2-1-96	MOBIL JALK FEE PCE	
CHECKED BY: E. Ferguson	DATE: 2-2-96	PROJECT NUMBER: 03.0601382.000	
APPROVED BY: T. Bubier	DATE: 2-2-96	REVISION DATE: 7-1-96	DRAWING FILE # 10-14

METHOD BLANK

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3510

Sample ID: 12/27/95 MB/35911
Date Prepared: 12/27/95 12:35
Initial Wt./Volume: 1000 mL
Final Volume: 1 mL

Lab ID: 35911-MB /7950
Matrix: Water
Batch Number: 4859-951227

Analyte	Result mg/L (ppm)	Reporting Limit mg/L (ppm)	Date Analyzed
No petroleum fractions found	BRL	0.50	12/30/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

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Master Builders Technologies

Report Generated: 01/04/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3510

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Rinse Blank 2
Sample Number: RB-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 12:35
Initial Wt./Volume: 1000 mL
Final Volume: 1 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-17/35674-7950
Date/Time Sampled: 12/21/95 11:55
Matrix: Water (W)
Batch Number: 4859-951227

Analyte	Result mg/L (ppm)	Reporting Limit mg/L (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	0.50	1	12/30/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

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MATRIX SPIKE/MATRIX SPIKE DUPLICATE

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 5.0-0.0
Sample Number: MH-41
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 , 30 grams
Final Volume: 5 , 5 mL
MS Date Analyzed: 12/29/95

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-1/35922,35923-7950
Date/Time Sampled: 12/21/95 08:30
Matrix: Soil (S) Units: mg/Kg (ppm)
Batch Number: 4862-951227
% Moisture: NA

MSD Date Analyzed: 12/29/95

Analyte	(a) Sample Conc.	(b) MS/ MSD Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Diesel (C12-C22)	0	83	68	82	63	75	8	52-125	≤25

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

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LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Date Prepared: 12/27/95 08:00:
Initial Wt./Volume: 30 grams
Final Volume: 5 mL
LCS Date Analyzed: 12/28/95

Lab ID: 35921-LS2 /7950
Matrix: Soil Units: mg/Kg (ppm)
Batch Number: 4862-951227
LCSD Date Analyzed: NA

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Diesel (C12-C22)	0	83	59	71	NA	NA	NA	52-125	≤25

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

METHOD BLANK

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Sample ID: 12/27/95 MB/35920
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

Lab ID: 35920-MB /7950
Matrix: Soil
Batch Number: 4862-951227

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Date Analyzed
No petroleum fractions found	BRL	10	12/28/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 10.0-0.0
Sample Number: MH-11-3
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-39/35669-7950
Date/Time Sampled: 12/21/95 16:15
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/28/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 5.0-0.0
Sample Number: MH-11-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-38/35668-7950
Date/Time Sampled: 12/21/95 16:10
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/28/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 1.0-0.0
Sample Number: MH-11-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-37/35667-7950
Date/Time Sampled: 12/21/95 16:05
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	820	500	50	01/02/96

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 10.0-0.0
Sample Number: MH-10-3
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-33/35666-7950
Date/Time Sampled: 12/21/95 15:05
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 5.0-0.0
Sample Number: MH-10-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-32/35665-7950
Date/Time Sampled: 12/21/95 15:00
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 1.0-0.0
Sample Number: MH-10-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-31/35663-7950
Date/Time Sampled: 12/21/95 14:50
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-9 5.0-0.0
Sample Number: MH-9-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-28/35660-7950
Date/Time Sampled: 12/21/95 14:15
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-9 1.0-0.0
Sample Number: MH-9-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-27/35659-7950
Date/Time Sampled: 12/21/95 14:10
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	85	10	1	01/02/96

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-8 5.0-0.0
Sample Number: MH-8-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-24/35653-7950
Date/Time Sampled: 12/21/95 13:50
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-8 1.0-0.0
Sample Number: MH-8-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-23/35639-7950
Date/Time Sampled: 12/21/95 13:45
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	1600	500	50	01/02/96

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Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-7 10.0-0.0
Sample Number: MH-7-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-19/35636-7950
Date/Time Sampled: 12/21/95 13:10
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/03/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-7 5.0-0.0
Sample Number: MH-7-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-18/35634-7950
Date/Time Sampled: 12/21/95 13:05
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-2 10.0-0.0
Sample Number: MH-2-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-14/35633-7950
Date/Time Sampled: 12/21/95 11:35
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	13	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-2 5.0-0.0
Sample Number: MH-2-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-13/35619-7950
Date/Time Sampled: 12/21/95 1:30
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-6 10.0-0.0
Sample Number: MH-6-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-11/35540-7950
Date/Time Sampled: 12/21/95 11:05
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-6 5.0-0.0
Sample Number: MH-6-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-10/35539-7950
Date/Time Sampled: 12/21/95 11:00
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	01/02/96

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EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-5 10.0-0.0
Sample Number: MH-5-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-8/35538-7950
Date/Time Sampled: 12/21/95 10:35
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-5 5.0-0.0
Sample Number: MH-5-1
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-7/35537-7950
Date/Time Sampled: 12/21/95 10:25
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 10.0-0.0
Sample Number: MH-4-2
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-2/35536-7950
Date/Time Sampled: 12/21/95 08:40
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

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Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 5.0-0.0
Sample Number: MH-41
Date/Time Received: 12/22/95 9:00
Date Prepared: 12/27/95 08:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-1/35535-7950
Date/Time Sampled: 12/21/95 08:30
Matrix: Soil (S)
Batch Number: 4862-951227
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/29/95

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Approved by: _____ Date: 1-4-96

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Master Builders Technologies

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Date Prepared: NA

Lab ID: 36437-LS1 /4101
Matrix: Water Units: ug/L (ppb)
Batch Number: 4934

LCS Date Analyzed: 12/27/95

LCSD Date Analyzed: NA
Instrument/Column: vgc03.i/DB-WAX
Data File: 95361c16-0

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Benzene	0	10	11	107	NA	NA	NA	72-134	≤20
Ethyl benzene	0	10	11	106	NA	NA	NA	72-128	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) LCS/ LCSD Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
Orthochlorotoluene	4.0	4.4	110	NA	NA	80-120

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

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Approved by: _____ Date: 1-8-96

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METHOD BLANK

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Sample ID: 12/27/95 MB/36436
Date Prepared: NA

Lab ID: 36436-MB /4101
Matrix: Water
Batch Number: 4934
Instrument/Column: vgc03.i/DB-WAX
Data File: 95361c17-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Date Analyzed
Benzene	BRL	0.50	12/27/95
Toluene	BRL	0.50	12/27/95
Ethyl benzene	BRL	0.50	12/27/95
1,2-Xylene	BRL	0.50	12/27/95
1,3-Xylene	BRL	0.50	12/27/95
1,4-Xylene	BRL	0.50	12/27/95

Surrogates	% Recovery	Limits
Orthochlorotoluene	120	80 - 120

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Approved by: _____ Date: 1-9-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/05/96

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Trip Blank
Sample Number: Trip Blank
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: NA
Final Volume: NA

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-43/35680-4101
Date/Time Sampled: 12/21/95 16:45
Matrix: Water (W)
Batch Number: 4934

Instrument/Column: vgc03.i/DB-WAX
Data File: 95361c23-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	0.50	1	12/27/95
Toluene	BRL	0.50	1	12/27/95
Ethyl benzene	BRL	0.50	1	12/27/95
1,2-Xylene	BRL	0.50	1	12/27/95
1,3-Xylene	BRL	0.50	1	12/27/95
1,4-Xylene	BRL	0.50	1	12/27/95

Surrogates	% Recovery	Limits
Orthochlorotoluene	123 *	80 - 120

Qualifier Legend:
* - Values outside QC limits

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Approved by: _____ Date: 1-8-96

MBT Environmental Laboratories

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VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Rinse Blank
Sample Number: RB-3
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: NA
Final Volume: NA

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-21/35675-4101
Date/Time Sampled: 12/21/95 11:56
Matrix: Water (W)
Batch Number: 4934

Instrument/Column: vgc03.i/DB-WAX
Data File: 95361c24-0

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	0.50	1	12/27/95
Toluene	BRL	0.50	1	12/27/95
Ethyl benzene	BRL	0.50	1	12/27/95
1,2-Xylene	BRL	0.50	1	12/27/95
1,3-Xylene	BRL	0.50	1	12/27/95
1,4-Xylene	BRL	0.50	1	12/27/95

Surrogates	% Recovery	Limits
Orthochlorotoluene	123 *	80 - 120

Qualifier Legend:
* - Values outside QC limits

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Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/05/96

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 5.0-0.0
Sample Number: MH-41
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 , 20 grams
Final Volume: 10 , 10 mL
MS Date Analyzed: 12/28/95

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-1/36036,36037-4101
Date/Time Sampled: 12/21/95 08:30
Matrix: Soil (S) Units: ug/Kg (ppb)
Batch Number: 4879
% Moisture: NA

MSD Date Analyzed: 01/03/96
Instrument/Column: vgc04.i/DB-WAX
Data File: 96003d21.0, 96003d22-

Analyte	(a) Sample Conc.	(b) MS/MSD Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Benzene	0	250	220	87	230	94	4	70-124	≤25
Ethyl benzene	0	250	220	86	230	93	4	67-128	≤25

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) MS/MSD Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
Bromofluorobenzene	200	170	84	180	88	60-111

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

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Approved by: _____ Date: 1-8-96

MBT Environmental Laboratories

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LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL
LCS Date Analyzed: 12/28/95

Lab ID: 36040-LS1 /4101
Matrix: Soil Units: ug/Kg (ppb)
Batch Number: 4879
LCSD Date Analyzed: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95361d35-0

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Benzene	0	250	250	99	NA	NA	NA	70-124	≤25
Ethyl benzene	0	250	250	99	NA	NA	NA	67-128	≤25

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) LCS/ LCSD Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
Bromofluorobenzene	200	200	98	NA	NA	60-111

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

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METHOD BLANK

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Sample ID: 12/27/95 MB/36039
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

Lab ID: 36039-MB /4101
Matrix: Soil
Batch Number: 4879
Instrument/Column: vgc04.i/DB-WAX
Data File: 95361d34-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Date Analyzed
Benzene	BRL	10	12/28/95
Toluene	BRL	10	12/28/95
Ethyl benzene	BRL	10	12/28/95
1,2-Xylene	BRL	10	12/28/95
1,3-Xylene	BRL	10	12/28/95
1,4-Xylene	BRL	10	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	101	60 - 111

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Approved by: _____ Date: 1-8-96

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VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-6 10.0-0.0
Sample Number: MH-6-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-11/35540-4101
Date/Time Sampled: 12/21/95 11:05
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d20-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	90	60 - 111

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Approved by: _____ Date: 1-9-96

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Master Builders Technologies

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-6 5.0-0.0
Sample Number: MH-6-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-10/35539-4101
Date/Time Sampled: 12/21/95 11:00
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d19-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	96	60 - 111

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Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

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VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-5 10.0-0.0
Sample Number: MH-5-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-8/35538-4101
Date/Time Sampled: 12/21/95 10:35
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d18-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	91	60 - 111

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Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-5 5.0-0.0
Sample Number: MH-5-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-7/35537-4101
Date/Time Sampled: 12/21/95 10:25
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d17-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	88	60 - 111

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-8-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 10.0-0.0
Sample Number: MH-4-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-2/35536-4101
Date/Time Sampled: 12/21/95 08:40
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d16-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	94	60 - 111

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX)
Preparation Method: EPA 5030

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 5.0-0.0
Sample Number: MH-41
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 20 grams
Final Volume: 10 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-1/35535-4101
Date/Time Sampled: 12/21/95 08:30
Matrix: Soil (S)
Batch Number: 4879
% Moisture: NA
Instrument/Column: vgc04.i/DB-WAX
Data File: 95362d15-0

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Benzene	BRL	10	1	12/28/95
Toluene	BRL	10	1	12/28/95
Ethyl benzene	BRL	10	1	12/28/95
1,2-Xylene	BRL	10	1	12/28/95
1,3-Xylene	BRL	10	1	12/28/95
1,4-Xylene	BRL	10	1	12/28/95

Surrogates	% Recovery	Limits
Bromofluorobenzene	103	60 - 111

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

GENERAL NARRATIVE

Comments:

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

Percent recoveries for laboratory control samples and matrix spikes have been calculated using unrounded concentration values. Therefore, percent recoveries reported may differ slightly from those obtained from the rounded concentration values which appear on the report.

EPA 8020 BTEX (Water):

The surrogate recoveries for the analytes flagged on the data sheet were beyond acceptance limits for the following samples: 13194-21, 13194-43.

EPA 8015 Modified Fuel Fingerprinting:

For EPA 8015 Modified - Fuel Fingerprinting (GC), all peaks within the C7-C32 carbon range are compared to the standard which the peaks most closely resemble. Values reported are calculated based on the total area of the peaks in the carbon range of that standard.

Abbreviations and Definitions:

MB	*Method Blank* - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	*Laboratory Control Sample* - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	*Matrix Spike/Matrix Spike Duplicate* - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	*Relative Percent Difference* - The measurement of precision between duplicate analyses
BRL	*Below Reporting Limit*
NS	*Not Specified*
NA	*Not Applicable*

Flags:

Organics -

J	Estimated value below the reporting limit and at or above the method detection limit.
B	Analyte found in the associated blank, as well as in the sample.

Inorganics -

B	Estimated value below the reporting limit and at or above the method detection limit.

ANALYTICAL REPORT

LABORATORY PROJECT (LP) NUMBER 13194

MOBIL JALK FEE

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

ARIZONA:	Hazardous Waste, #AZ0468 Waste Water, # AZ0468 Drinking Water, #AZ0468	
✓ CALIFORNIA:	Hazardous Waste, #1417 Waste Water, # 1417 Drinking Water, #1417 Mobile Lab, #2070	
CONNECTICUT:	Waste Water, #PH0799	
FLORIDA:	Environmental Water, #E87298 CQAPP #930105	
KANSAS:	Hazardous Waste, #E-1167 Waste Water, #E-192 Drinking Water, #E-192	
NEW HAMPSHIRE:	Waste Water, #253195-B Drinking Water, #253195-A	
NEW JERSEY:	Waste Water, #44818	
NEW YORK:	Hazardous Waste, #11241 Waste Water, #11241 CLP, #11241	
OKLAHOMA:	Hazardous Waste, #9318 Waste Water, #9318	
SOUTH CAROLINA:	Hazardous Waste, #87013 Waste Water, #87013	
TENNESSEE:	Underground Storage Tank	
WASHINGTON:	Hazardous Waste, #C048	
WISCONSIN:	Hazardous Waste, #999940920 Waste Water, #999940920	
USACOE:	Hazardous Waste Waste Water	
AFCEE	Hazardous Waste Waste Water	

(CN13194)

5/5

Lockheed Missiles & Space Company, Inc.
1111 LOCKHEED WAY, O/47-10 B/101, SUNNYVALE, CA 94089-3504

Number: AA 973

Chain-Of-Custody Record & Analysis Request

Sampler Signature: Mike Warriner Field Notebook Number: MIKE WARRINER

Project Number: 03.06014.4.002 Project Name: MOBIL JALK FEE

LIMS Number: LP#13194 Sample Number(s):

SAMPLE ID	Sample Type: GRAB	Sample Type: COMPOSITE	VOLUME (ml)	Matrix: WATER	Matrix: SOIL	Matrix: AIR	Matrix: SLUDGE	Matrix: OTHER	Method Preserved: NO HEADSPACE	Method Preserved: Na_2SO_3	Method Preserved: NaOH	Method Preserved: $Na_2S_2O_3$ (H_2SO_4)	Method Preserved: HCl	Method Preserved: HNO_3	Method Preserved: NONE	Method Preserved: OTHER	Sampling: DATE	Sampling: TIME	Analysis Request: pH (846-9040)	Conductivity (846-9050)	Normality (600-310.1),(600-305.2)	Cr + 6 (846-7196)	Trmet (846-7000)	Tmet (846-6010) prep. 3010,3030,3050	Rmet (846-6010) prep. APH STD MTH 302B	Na (846-7000FL)	Cl (600-300.0)	CN (846-9010),(LMSC-CN)	TOC (846-9060)	TOX (846-9020)	Phenols (846-8040)	VOA (846-8240)	NO3 (600-300.0)	O&G (846-9070)	TPH (600-418.1)	PCB (846-8080)	Semi Volatiles (846-8270)	Other: 8240	Other: 8015 M (FS)	Other: 8020	Turnaround Time: PRIORITY ONE SERVICE (24 HR)	Turnaround Time: EXPEDITED SERVICE (2-4 DAYS)
MH-11-6					X		MH-11 @ 25 ft								X		12/21	1645						13194				042								X	X		HOL
TRIP BLANK				X													12/21	1645							L			043								X		X		

Temp 3°C, Samples Intact
Location: 4-5, 8, 7, 12-A

Rush Authorization Signature: Date: Time:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Warriner, Mike Miller	12/21/95	1747	Richard Turbeville	12-21	1745
EXPRESS IT	12/22/95	0900	Cindy N.	12/22/95	0900

Remarks:
CALL RESULTS TO
EVERETT FERGUSON
McLAREN/HART
IRVINE OFFICE
LEVEL 1 QC

DISTRIBUTION

LMSC 3290

4/5

CHAIN OF CUSTODY RECORD 11224

Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

SEE SIDE 2 FOR COMPLETE INSTRUCTIONS

Ship To: _____
Address: _____

Project Name: MOBIL JALK FEE
Project Number: 03-0601414.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13194
Storage Refrigerator ID: 11, 12, 13, 12, A
Storage Freezer ID: _____

Sampler Name: Mike Wariner
Signature: [signature]
PPE Worn in Field: LEVEL D

Relinquished By: Mike Wariner — Date/Time: 12/21/95 1747 — Received By or Method of Shipment/Shipment I.D.: Pedro FUALANETTO — Date/Time: 12-21 1747
Relinquished By: EXPRESS IT — Date/Time: 12/22/95 — Received By or Method of Shipment/Shipment I.D.: Cindy N. — Date/Time: 12/22/95 0900
Relinquished By: _____ — Date/Time: _____ — Received By or Method of Shipment/Shipment I.D.: _____ — Date/Time: _____

Sample Disposal (check one)
- [X] Laboratory Standard
- [ ] Other

Level of QC (see Side 2): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6A [ ] 6B [ ] 6C [ ] 6D [ ] 6E [ ] 6F [ ] 7 [ ] 8

Write in Analysis Method →

SAMPLE INFORMATION

ANALYSES REQUESTED

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT	8240	8015M (FS)	BOD	
1 13194-032	MH-10-2	12/21	1500	MH-10	5 ft	2	BRASS	SOIL	—	2WK	X	X		
2 033	MH-10-3	12/21	1505	MH-10	10 ft	↑	↑	↑	↑	↑	X	X		HOLD
3 034	MH-10-4	12/21	1510	MH-10	15 ft						X	X		
4 035	MH-10-5	12/21	1530	MH-10	20 ft						X	X		
5 036	MH-10-6	↑	1550	MH-10	25 ft						X	X		
6 037	MH-11-1		1605	MH-11	1 ft						X	X		
7 038	MH-11-2		1610	MH-11	5 ft						X	X		
8 039	MH-11-3		1615	MH-11	10 ft						X	X		
9 040	MH-11-4		1625	MH-11	15 ft	↓	↓	↓	↓	↓	X	X	2	HOLD
10 041	MH-11-5	12/21	1435	MH-11	20 ft	2	BRASS	SOIL	—	2WK	X	X	3	

Special Instructions/Comments:
ANALYZE MH-10-1,2,3 + HOLD MH-10-4,5,6

Container Types: B=Brass Tube, C=Cassette, G=Glass Jar, O=Other _____, A=1 Liter Amber, P=Polyethylene, V=Voa Vial
TAT (Analytical Turn Around Time): 1 = 24 hours, 2 = 48 hours, 3 = 1 week, 4 = 2 weeks, 0 = Other _____

FOR LABORATORY USE ONLY Sample Condition Upon Receipt: TEMP 3°C

SEND DOCUMENTATION AND RESULTS TO (Check one):
- [X] Project Manager/Office: EVERETT FERGUSON
- [ ] Client Name: _____

Company: McLAREN/HART
Address: IRVINE OFFICE
Phone: _____ FAX: _____

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivoa
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

* Specify Total or Dissolved

Mobile Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

SMI 10, 2/5

CHAIN OF CUSTODY RECORD 11223

SEE SIDE 2 FOR COMPLETE INSTRUCTIONS

Ship To: SEE ABOVE
Address:

Project Name: MOBIL JALK FEE
Project Number: 03.0601.94.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13194
Storage Refrigerator ID: 4-5, 9, 11B-11
Storage Freezer ID:

Sampler Name: MIKE WARRINER
Signature:
PPE Worn in Field: LEVEL D

Relinquished By: MIKE WARRINER — Date/Time: 12/21 1747 — Received By or Method of Shipment/Shipment I.D.: Pedro Fuentes — Date/Time: 12-21 1745
Relinquished By: EXPRESS IT — Date/Time: 12/22/95 — Received By or Method of Shipment/Shipment I.D.: Cindy N. — Date/Time: 12/22/95
Relinquished By: — Date/Time: — Received By or Method of Shipment/Shipment I.D.: — Date/Time:

Sample Disposal (check one)
- [X] Laboratory Standard
- [ ] Other

Level of QC (see Side 2): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6A [ ] 6B [ ] 6C [ ] 6D [ ] 6E [ ] 6F [ ] 7 [ ] 8

Write in Analysis Method →

SAMPLE INFORMATION

ANALYSES REQUESTED

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT	8240	8015 m (ES)	8020	
1 13194-022	MH-7-4	12/21	1320	MH-7	1 ft	2	BRASS	SOIL	—	2WK	X	X		← HOLD
2 023	MH-8-1		1345	MH-8	1 ft						X	X		
3 024	MH-8-2		1350	MH-8	5 ft						X	X		
4 025	MH-8-3		1355	MH-8	10 ft						X	X		
5 026	MH-8-4		1405	MH-8	15 ft						X	X		← HOLD
6 027	MH-9-1		1410	MH-9	1 ft						X	X		
7 028	MH-9-2		1415	MH-9	5 ft						X	X		
8 029	MH-9-3		1420	MH-9	10 ft						X	X		← HOLD
9 030	MH-9-4		1430	MH-9	15 ft						X	X		
10 031	MH-10-1	12/21	1450	MH-10	1 ft	2	BRASS	SOIL	—	2WK	X	X		

Special Instructions/Comments:

Container Types: B=Brass Tube, C=Cassette, G=Glass Jar, P=Polyethylene, V=Voa Vial, O=Other
A=1 Liter Amber
TAT (Analytical Turn Around Time): 1 = 24 hours, 2 = 48 hours, 3 = 1 week, 4 = 2 weeks, 0 = Other

FOR LABORATORY USE ONLY Sample Condition Upon Receipt:
TEMP °C

SEND DOCUMENTATION AND RESULTS TO (Check one):
- [X] Project Manager/Office: EVERETT FERGUSON
- [ ] Client Name:

Company: McLAREN/HART
Address: IRVINE OFFICE
Phone: FAX:

Common Analytical Methods:
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivoa
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

* Specify Total or Dissolved

Environmental Laboratories
3005 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD 11225

SEE SIDE 2 FOR COMPLETE INSTRUCTIONS

Ship To: _____
Address: _____

Project Name: MOBIL JALK FEE
Project Number: 03.060141A.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13194
Storage Refrigerator ID: 4-5, 8, 7, 2A
Storage Freezer ID: _____

Sampler Name: MIKE WARRINER
Signature: [signature]
PPE Worn in Field: LEVEL D

Relinquished By: Mike Warriner [signature] Date/Time: 12/21/95 1747
Received By or Method of Shipment/Shipment I.D.: Pedro Fuhrmeister 12-21 Date/Time: 1745

Relinquished By: EXPRESS 17 Date/Time: 12-22-95 (9:)
Received By or Method of Shipment/Shipment I.D.: Cindy M. 12-22-95 (9:) Date/Time

Relinquished By: _____ Date/Time
Received By or Method of Shipment/Shipment I.D. _____ Date/Time

Sample Disposal (check one)
☒ Laboratory Standard
☐ Other

Level of QC (see Side 2): ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B ☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8

Write in Analysis Method →

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT	8240	8015M (FS)	8020	
13194-011	MH-6-2	12/21	1105	MH-6	10 ft	2	BRASS	SOIL	—	2 WK		X	X	
012	MH-6-3	↑	1115	MH-6	15 ft		↕	↕	—	↑		X	X	← HOLD
013	MH-2-1		1130	MH-2	5 ft		↕	↕	—	↕	X	X		
014	MH-2-2		1135	MH-2	10 ft		↓	↕	—	↕	X	X		
015	MH-2-3		1145	MH-2	15 ft		BRASS	SOIL	—	↓	X	X		← HOLD
016	RB-1		1155	RINSE BLANK 1	—	2	40 mL VOA	water	—	7 DAY	X			
017	RB-2		1155	RINSE BLANK 2	—	1	1 L amber	water	—	2 WK		X		
018	MH-7-1		1305	MH-7	5 ft	2	BRASS	SOIL	—	2 WK	X	X		
019	MH-7-2		1310	MH-7	10 ft	2	BRASS	SOIL	—	2 WK	X	X		
020	MH-7-3	12 ↓	1315	MH-7	15 ft	2	BRASS	SOIL	—	2 WK	X	X		← HOLD
021	RB-3	12/21	1155	RINSE BLANK	—	2	40 mL VOA	HCL	—	2 WK		☒		

Special Instructions/Comments: 11 SAMPLES ON SHEET

Container Types: B=Brass Tube, C=Cassette, G=Glass Jar, O=Other _____, A=1 Liter Amber, P=Polyethylene, V=Voa Vial

TAT (Analytical Turn Around Time): 1 = 24 hours, 2 = 48 hours, 3 = 1 week, 4 = 2 weeks, 0 = Other _____

FOR LABORATORY USE ONLY Sample Condition Upon Receipt: _____

SEND DOCUMENTATION AND RESULTS TO (Check one):
☒ Project Manager/Office: EVERETT FERGUSON
☐ Client Name: _____
Company: MCLAREN HART
Address: IRVINE OFFICE
Phone: 714 752 3213 FAX: _____

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivoa
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity
* Specify Total or Dissolved

MBT Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD 11217

SEE SIDE 2 FOR COMPLETE INSTRUCTIONS

Ship To:
Address:

Project Name: MOBIL JACK FEE
Project Number: 03.0601414.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13194
Storage Refrigerator ID: 4-3,7,11,12-14
Storage Freezer ID:

Sampler Name: MIKE WARRINER
Signature: [signature]
PPE Worn in Field: LEVEL D

Relinquished By	Date/Time	Received By or Method of Shipment/Shipment I.D.	Date/Time
[signature] Mike WARRINER	12/21/95 1747	Pedro Fulanetta	12-21 · 1745
EXPRESS IT	12/22/95 0900	Cindy N.	12/22/95 0900

Sample Disposal (check one)
- [X] Laboratory Standard
- [ ] Other

Level of QC (see Side 2): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6A [ ] 6B [ ] 6C [ ] 6D [ ] 6E [ ] 6F [ ] 7 [ ] 8

Write in Analysis Method →

ANALYSES REQUESTED

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT	8240	8015m FS	8020	
1 13194-001	MH-4-1	12/21	830A	MH-4	5 ft	2	brass	soil	None	2wk		X	X	
2 002	MH-4-2	12/21	840	↑	10 ft	↑	↑	↑	↑	↑		X	X	
3 003	MH-4-3	12/21	845		15 ft							X	X	← HOLD
4 004	MH-4-4		900		20 ft						X			
5 005	MH-4-5		930	↓	30 ft						X			
6 006	MH-4-6		1005	MH-4	40 ft						X			
7 007	MH-5-1		1025	MH-5	5 ft							X	X	
8 008	MH-5-2		1035	MH-5	10 ft							X	X	
9 009	MH-5-3	↓	1045	MH-5	15 ft	↓	↓	↓	↓	↓		X	X	← HOLD
10 010	MH-6-1	12/21	1100	MH-6	5 ft	2	BRASS	SOIL	NONE	2wk		X	X	

Special Instructions/Comments:

Container Types: B=Brass Tube, G=Glass Jar, O=Other, A=1 Liter Amber, C=Cassette, P=Polyethylene, V=Voa Vial

TAT (Analytical Turn Around Time): 1 = 24 hours, 2 = 48 hours, 3 = 1 week, 4 = 2 weeks, 0 = Other

FOR LABORATORY USE ONLY Sample Condition Upon Receipt: [illegible]

SEND DOCUMENTATION AND RESULTS TO (Check one):
- [X] Project Manager/Office: EVERETT FERGUSON
- [ ] Client Name:

Company:
Address:
Phone: FAX:

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22: TTLC Level, STLC Level (see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP: VOA, Semivoa, Metals, Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

* Specify Total or Dissolved

MBT Environmental
Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

Master Builders Technologies

Date: January 10, 1996
LP #: 13194

Everett Ferguson
McLaren/Hart, Inc.
16755 Von Karman Avenue
Irvine, CA 92714

Dear Mr. Ferguson:

Enclosed are the laboratory results for the samples submitted to MBT Environmental Laboratories on December 22, 1995, for the project *Mobil Jalk Fee*.

The report consists of the following sections:

1. Cover Page
2. Copy of Chain-of-Custody
3. General Narrative
4. Analytical and Quality Control Results

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing MBT Environmental Laboratories. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,

Chris Phillips
Project Coordinator

Enclosure: EDD

Appendix D

Chain-of-Custody and Laboratory Data Sheets

McLaren/Hart appreciates the opportunity to provide consulting services for Mobil Exploration and Producing U.S. Inc. If you have any questions, please do not hesitate to contact me at (714) 752-3268.

Sincerely,

Kristina L. Parke

Kristina L. Parke
Assistant Environmental Scientist

Donald G. Koch
Principal Regulatory Compliance Management

To the east of the subject site was Norwalk Boulevard, across which were two commercial/industrial buildings.

The property to the west was mainly undeveloped with a few oil derricks.

February 3, 1969 (E-63-232; UCLA)

There were no significant changes noted to either the subject site or the surrounding properties from the September 1968 aerial photograph.

March 22, 1976 (7600 7-14; McLaren/Hart)

The subject site was developed with a long rectangular building in the northeast corner of the lot with 3 smaller buildings to the west. There were ASTs in the northwest corner.

The property to the north was developed with commercial/industrial buildings.

The property to the south was developed with a building in the northeast corner (adjacent to the subject site).

To the east of the subject site was Norwalk Boulevard, across which was a commercial/industrial area.

The property to the west was mainly undeveloped.

October 28, 1980 (1280-119; McLaren/Hart)

It should be noted that due to the scale of this aerial photograph, individual features on the subject site as well as the surrounding properties were not clear.

The subject site and immediate surrounding area appeared similar to the March 1976 aerial photograph with the exception that there appeared to be only two buildings in the northeast corner of the subject site.

June 24, 1963 (216V55; McLaren/Hart)

The subject site and the surrounding properties appeared similar to the 216V56 aerial photograph.

August 22, 1964 (E-63-155; UCLA)

The subject site and the immediate surrounding areas appeared similar to the 1963 aerial photographs.

The property to the north was undeveloped on the eastern half of the property; however, it did appear that a portion of the lagoon/pond was still present. The remainder of the property appeared similar to the 1963 aerial photographs.

January 16, 1965 (E-63-161; UCLA)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

April 11, 1966 (E-63-184 & -193; UCLA)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

April 15, 1966 (E-63-198 & -199; UCLA)

It should be noted that the clarity of this aerial photograph was poor.

The subject site and the surrounding properties to the south, east and west appeared similar to the August 1964 aerial photograph.

The property to the north of the subject site appeared to be undeveloped.

September 23, 1968 (2400 5-218; McLaren/Hart)

The subject site was developed with buildings on the northeast corner and approximately 2 to 3 ASTs in the northwest corner.

The property to the north was undeveloped.

The property to the south was mainly undeveloped with some buildings in the southeast corner of the lot.

March 13, 1962 (157V86; McLaren/Hart)

The following features were noted in this aerial photograph that were not distinguishable in the previous March 13, 1962 aerial photograph:

- There appeared to be two standpipes at the southeast corner of the ASTs on the subject site.
- There appeared to be a structure to the east of the ASTs located on the subject site.
- There also appeared to be two rectangular structures in the southwest portion of the subject site.

The properties to the north, south, east and west appeared similar to the other March 13, 1962 aerial photograph (157V98;McLaren/Hart).

November 20, 1962 (C-24385-4-18 & -19; Whittier College)

The subject site and surrounding properties appeared similar to the other 1962 aerial photographs.

January 7, 1963 (E-63-144 & -145; UCLA)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

June 24, 1963 (216V-56; McLaren/Hart)

The following differences were noted on the subject site from the March 1962 aerial photograph:

- To the south of the structures in the northeast corner, there was a dark horseshoe shaped stain on the soil;
- In the southwest corner was a dark circular stain on the soil;
- To the north of the ASTs, there was a small structure with a sloped roof.

The properties to the north, south, east and west appeared similar to the 1962 aerial photographs.

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-28/35660-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	98	70 - 121
Toluene-d8	100	81 - 117
Bromofluorobenzene	100	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-9 5.0-0.0
Sample Number: MH-9-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-28/35660-8414
Date/Time Sampled: 12/21/95 14:15
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7542.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-27/35659-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	104	70 - 121
Toluene-d8	116	81 - 117
Bromofluorobenzene	97	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-9 1.0-0.0
Sample Number: MH-9-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-27/35659-8414
Date/Time Sampled: 12/21/95 14:10
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7541.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-24/35653-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	107	70 - 121
Toluene-d8	110	81 - 117
Bromofluorobenzene	108	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-8 5.0-0.0
Sample Number: MH-8-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-24/35653-8414
Date/Time Sampled: 12/21/95 13:50
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7564.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-23/35639-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	96	70 - 121
Toluene-d8	115	81 - 117
Bromofluorobenzene	84	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: JS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-8 1.0-0.0
Sample Number: MH-8-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-23/35639-8414
Date/Time Sampled: 12/21/95 13:45
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7563.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-19/35636-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	100	70 - 121
Toluene-d8	109	81 - 117
Bromofluorobenzene	106	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: JS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-7 10.0-0.0
Sample Number: MH-7-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-19/35636-8414
Date/Time Sampled: 12/21/95 13:10
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7540.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-18/35634-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates		% Recovery	Limits
1,2-Dichloroethane-d4	-	104	70 - 121
Toluene-d8		108	81 - 117
Bromofluorobenzene		105	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-7 5.0-0.0
Sample Number: MH-7-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-18/35634-8414
Date/Time Sampled: 12/21/95 13:05
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7539.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3510

Date Prepared: 12/27/95 12:35:
Initial Wt./Volume: 1000 mL
Final Volume: 1 mL
LCS Date Analyzed: 12/29/95

Lab ID: 35912-LS1 /7950
Matrix: Water Units: mg/L (ppm)
Batch Number: 4859-951227
LCSD Date Analyzed: NA

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
Diesel (C12-C22)	0	2.5	2.0	81	NA	NA	NA	34-153	≤25

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-4-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/04/96

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 20.0-0.0
Sample Number: MH-4-4
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-4/35615-8414
Date/Time Sampled: 12/21/95 9:00
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7535.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-4/35615-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	93	70 - 121
Toluene-d8	103	81 - 117
Bromofluorobenzene	97	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 30.0-0.0
Sample Number: MH-4-5
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-5/35616-8414
Date/Time Sampled: 12/21/95 9:30
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7536.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-5/35616-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	100	70 - 121
Toluene-d8	105	81 - 117
Bromofluorobenzene	102	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-4 40.0-0.0
Sample Number: MH-4-6
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-6/35617-8414
Date/Time Sampled: 12/21/95 10:05
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7537.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-6/35617-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	106	70 - 121
Toluene-d8	108	81 - 117
Bromofluorobenzene	106	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-2 5.0-0.0
Sample Number: MH-2-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-13/35619-8414
Date/Time Sampled: 12/21/95 1:30
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7538.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-13/35619-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	101	70 - 121
Toluene-d8	109	81 - 117
Bromofluorobenzene	104	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-2 10.0-0.0
Sample Number: MH-2-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-14/35633-8414
Date/Time Sampled: 12/21/95 11:35
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7562.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-14/35633-8414

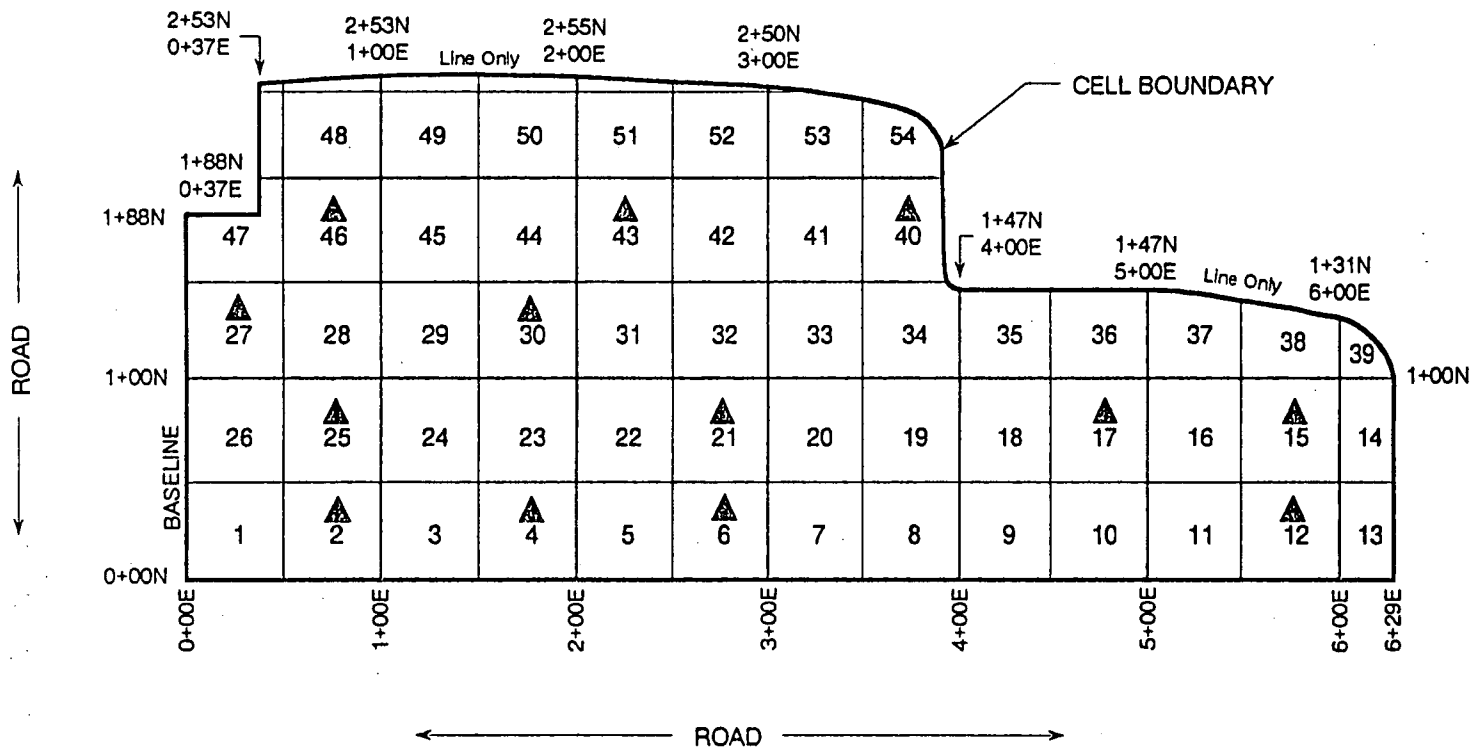
Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	95	70 - 121
Toluene-d8	102	81 - 117
Bromofluorobenzene	99	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

FIGURE 3
SOIL SAMPLE GRID LAYOUT
CELL #1
JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CAILIFORNIA



LEGEND

Closure Soil Sample Location

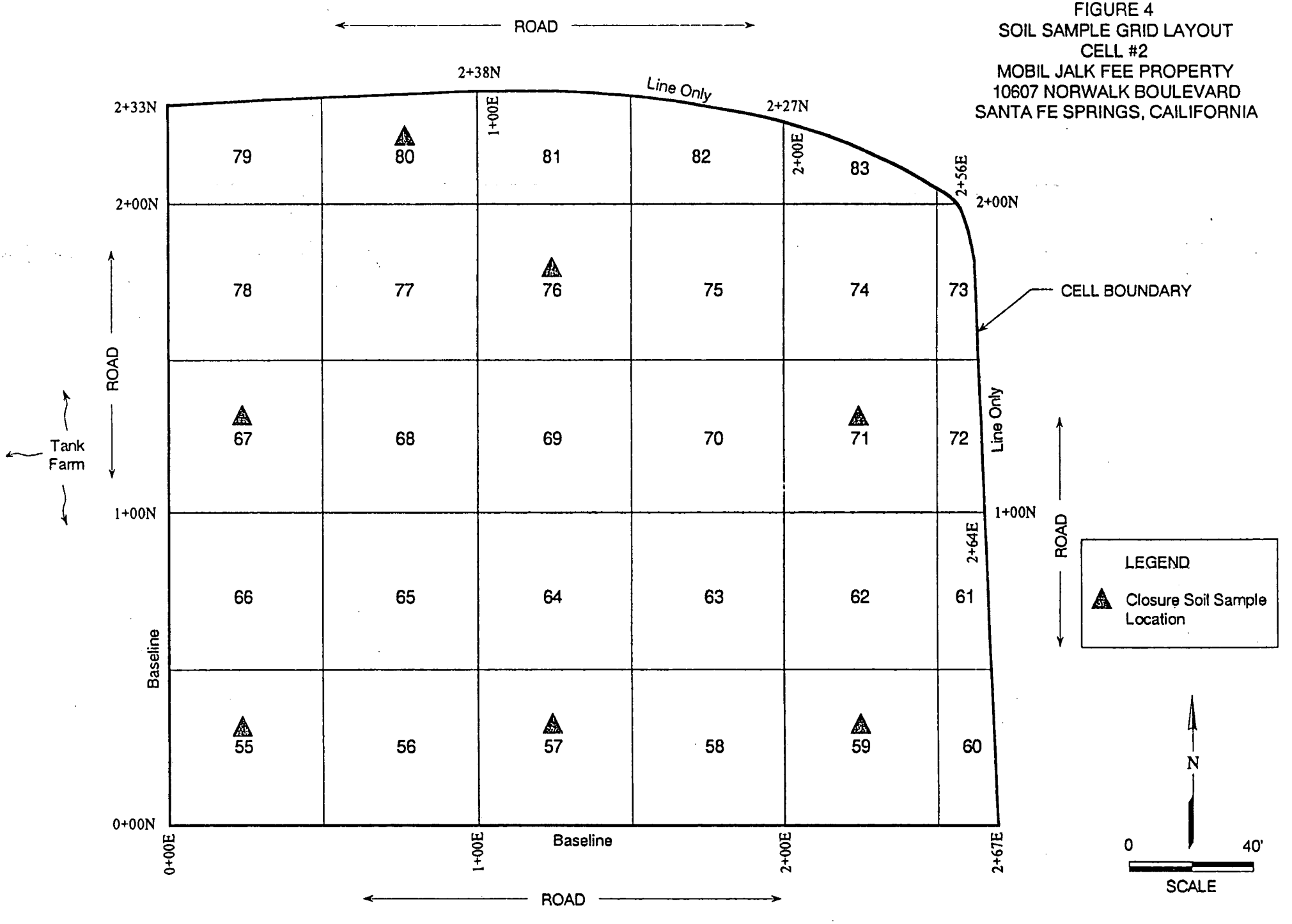
N

0 100'

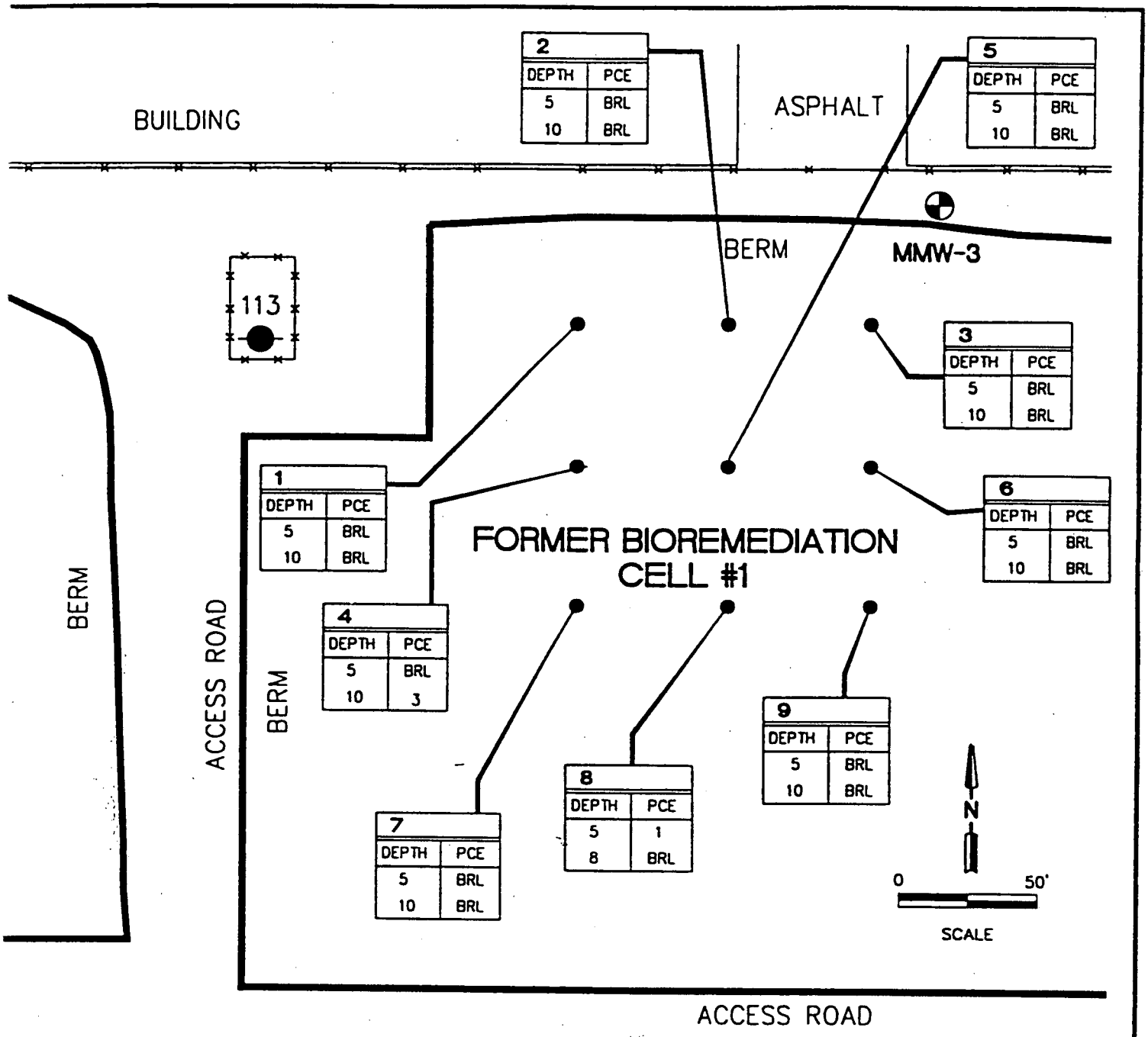
SCALE

T9404036*

FIGURE 4
SOIL SAMPLE GRID LAYOUT
CELL #2
MOBIL JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CAILIFORNIA



T9404037*



LEGEND

NOTES:	SITE MAP MODIFIED FROM LEVINE-FRICKE (1991c).
●—113	OPERATIONAL OIL WELL
———	CHAIN LINK FENCE
●	SOIL GAS SAMPLE LOCATION
(ppb)	CONCENTRATIONS IN PARTS PER BILLION

McLaren Hart
16755 VON KARMAN AVENUE, IRVINE, CA 92714
TEL (714)756-2667 FAX (714) 756-8460

FIGURE 15
SOIL GAS SURVEY RESULTS
FORMER TRUCKING OPERATING AREA
MOBIL-JALK FEE PROPERTY
10307 NORWALK BLVD.
SANTA FE SPRINGS, CALIFORNIA

DRAWN BY:	DATE:	PROJECT NAME:
E. Mureson	10-5-94	MOBIL
CHECKED BY:	DATE:	PROJECT NUMBER:
E. Ferguson	02/01/96	03.001382.000
APPROVED BY:	DATE:	REVISION DATE: / DRAWING FILE #
T. Bubier	02/01/96	01/31/96 vlb / 15

Appendix A

McLaren/Hart's Standard Protocols

McLAREN/HART STANDARD PROTOCOLS

COLLECTION OF SOIL SAMPLES USING A GEOPROBE

A Geoprobe is a truck-mounted hydraulically operated sampling unit designed to collect soil, soil gas, and groundwater samples at discrete depths. As no soil cuttings are generated during Geoprobe sampling, no cuttings require containerization, characterization and off-site disposal.

Soil samples were obtained by driving a two-foot long, brass-lined, stainless steel sampling tube equipped with an internal, moveable piston to a position just above the desired sampling depth. After the tube is properly positioned, the internal piston is released and the tube driven an additional twenty-four inches, allowing the soil to enter the tube. The sampling tube is then withdrawn and the soil sample removed from the tube within the brass liner.

The lower most tube from each sampled interval is trimmed of excess soil, sealed with squares of Teflon sheeting, and plastic end caps, labeled, and stored on ice in a thermally insulated ice chest. A sample label is attached to each sample tube identifying the date the sample was collected, a unique identification number, and other identifying information. Samples are couriered or shipped under chain-of-custody procedures to a State-certified hazardous waste testing laboratory.

A portion of the soil is extruded into a plastic airlock bag for headspace analysis. The bag is sealed immediately and left to stand for a few mixtures to allow volatile gases to enter the headspace of the bag. A photoionization detector (PID) calibrated to isobutylene or flame ionization detector (FID) is used in the field to analyze the headspace gases. Headspace readings are included on the soil boring logs.

Prior to sampling and between samples, all reusable sampling equipment is washed in a phosphate-free detergent solution, rinsed in tap water, and then rinsed in deionized water. Geoprobe borings are backfilled using bentonite granules.

COLLECTION OF SOIL SAMPLES USING A HAND AUGER

A 5-foot-long stainless steel hand auger, fitted with 5-foot long conduit extension(s) as needed, is used to drill an approximately 2- 1/4 inch-diameter boring to the proposed sample depth. Soil samples are collected at the appropriate depth as described in the scope of work. Prior to and between the sampling intervals, all reusable equipment is washed in a phosphate-free detergent solution, rinsed in tap water, and then rinsed in deionized water.

Each soil sample is collected by using a slide-hammer to drive a solid or split-spoon sampler lined with a 6-inch brass tube into the undisturbed soil at each sampling depth. The sample tubes are removed from the sampler, excess soil is trimmed, and each end of the sample tube is covered with Teflon squares and plastic end caps.

A sample label (or equivalent) is attached to each sample tube identifying the date the sample was collected, a unique identification number, and other identifying information. Soil samples are placed in a thermally insulated container with ice and shipped or couriered to a State-certified hazardous waste-testing laboratory using the appropriate chain-of-custody procedures.

COLLECTION OF SOIL SAMPLES USING A HOLLOW STEM AUGER DRILLING RIG

Prior to and between the sampling intervals, all reusable equipment is washed in a phosphate-free detergent solution, rinsed in tap water, and then rinsed in deionized water.

Soil samples are obtained in clean, 2-inch diameter, 3- or 6-inch-long brass tubes using an 18-inch California modified split-spoon sampler. Three six-inch tubes are inserted into the split-spoon sampler, which is driven into undisturbed soil ahead of the auger bit using a 140-pound hammer. Blow counts are recorded for each 6-inch driving interval.

The lowermost tube from each sampled interval is trimmed of excess soil, each end of the sample tube is covered with Teflon squares and plastic end caps. A sample label is attached to each sample tube identifying the date the sample was collected, a unique identification number, and other identifying information. Soil samples are placed in a thermally insulated container with ice and shipped or couriered to a State-certified hazardous waste-testing laboratory using the appropriate chain-of-custody procedures.

The middle tube of the sample is inspected for texture, color, moisture content, hydrocarbon odor, and other distinguishing characteristics. The lithology is logged using the Unified Soils Classification System and is recorded on a soil boring log.

Approximately half of the soil in the middle or upper brass tube is extruded into a plastic airlock bag for headspace analysis. The bag is sealed immediately and left to stand for a few minutes to allow volatile gases to enter the headspace of the bag. A photoionization detector (PID) calibrated to isobutylene or flame ionization detector (FID) is used in the field to determine the concentration of volatile organic compounds (VOCs) which originate from the soil sample. Field VOC readings are included on the soil boring logs.

Soil cuttings generated by drilling are temporarily stored on-site in 55-gallon DOT approved drums, pending analytical results and proper disposal. Soil borings are backfilled to 1 foot below grade with hydrated bentonite chips or bentonite grout and finished to grade with asphalt patch, concrete, or native soil as appropriate.

Appendix B

Soil Boring Logs

SB/MW#: MH-4
#D- 15597
Page 1 of 1
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jaik Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION _____ MONITORING DEVICE PID
SAMPLING DATE(S) 12-29-95 START 9:15 AM FINISH 11:00 AM
SAMPLING METHOD CA MOD SPLIT SPOON SUBCONTRACTOR & EQUIPMENT BC2 Environmental
MEMO _____

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
0						0.0				
5						@5' Sandy silt (0,30,60,10); strong brown (7.5YR 4/6); (100% fine); medium dense; damp.	ML			Backfilled with Hydrated Bentonite Chips
10										
15						15.0				
						Sand: (0,90,10,0); dark grayish brown (2.5Y 4/2); medium dense; damp.	SM			
20						20.0				
						Silt: (0,0,100,0); medium dense; damp.	ML			
25										
30						@30' Becomes clayey.				
35										
40						40.0				T.D. = 40'

SB/MW#: MH-10
#D- 15598
Page 1 of 1
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION _____ MONITORING DEVICE PID
SAMPLING DATE(S) 12-29-95 START _____ FINISH _____
SAMPLING METHOD CA MOD SPLIT SPOON SUBCONTRACTOR & EQUIPMENT BC2 Environmental
MEMO _____

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
0						0.0 Silt (0,10,90,0); strong brown (7.5YR 4/6); (100% fine); dense; damp to dry.	ML			
5						@5' Becomes slightly clayey.				Backfilled with Hydrated Bentonite Chips
10										
15						@15' Dark grayish brown (2.5Y 4/2).				
20										
						24.0				
25						25.0 Silty clay: (0,0,30,70); medium dense; low plasticity; damp.	CL			T.D. = 25'
30										
35										
40										

SB/MW#: MH-11
#D- 15599
Page 1 of 1
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION _____ MONITORING DEVICE PID
SAMPLING DATE(S) 12-29-95 START _____ FINISH _____
SAMPLING METHOD CA MOD SPLIT SPOON SUBCONTRACTOR & EQUIPMENT BC2 Environmental
MEMO _____

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description: Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silt (0,10,90,0); strong brown (7.5YR 4/6); (100% fine); dense; damp to dry.	ML			
5						@5' Becomes slightly clayey.				
10										
15						@15' Dark grayish brown (2.5Y 4/2).				
20										
						24.0				
25						25.0 Silty clay: (0,0,40,60); medium dense; low plasticity; damp.	CL			T.D. = 25'
30										
35										
40										

Backfilled with Hydrated Bentonite Chips

SB/MW#: GP-19
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Model 580B
SAMPLING DATE(S) 12-22-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description: Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silty sand: (0,65,45,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							
						10.0				
10			9.0 11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
15			14.0 16.0			@15' Sand: (0,100,0,0); brown (7.5YR 4/3); (60% medium, 20% fine, 20% very fine sand); graded; medium dense; damp.				
						20.0				
20			19.0 21.0			Silty sand: (0,70,30,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry.	SM			
25			24.0 26.0			@25' Same as 20'.				
						30.0				
30			29.0			Continued Next Page				

Backfilled with Hydrated Bentonite Granules

SB/MW#: GP-19
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			Sandy silt: (0,15,80,15); brown (10YR 4/3); non-plastic; stiff; dry.	ML			
			34.0							
35			36.0			@35' Sandy silt: (0,23,70,7); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 Sand: (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: GP-20
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Model 580B
SAMPLING DATE(S) 12-22-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silty sand: (0,65,45,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							Backfilled with Hydrated Bentonite Granules
			9.0			10.0				
10			11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
			14.0							
15			16.0			@15' Sand: (0,100,0,0); brown (7.5YR 4/3); (60% medium, 20% fine, 20% very fine sand); graded; medium dense; damp.				
			19.0			20.0				
20			21.0			Silty sand: (0,70,30,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry.	SM			
			24.0							
25			26.0			@25' Same as 20'.				
			29.0			30.0				
30						Continued Next Page				

SB/MW#: GP-20
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			Sandy silt: (0,15,80,15); brown (10YR 4/3); non-plastic; stiff; dry.	ML			
			34.0							
35			36.0			@35' Sandy silt: (0,23,70,7); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 Sand: (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: GP-21
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Model 580B
SAMPLING DATE(S) 12-22-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description: Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silty sand: (0,65,45,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							Backfilled with Hydrated Bentonite Granules
			9.0			10.0				
10			11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
			14.0							
15			16.0			@15' Sand: (0,100,0,0); brown (7.5YR 4/3); (60% medium, 20% fine, 20% very fine sand); graded; medium dense; damp.				
			19.0			20.0				
20			21.0			Silty sand: (0,70,30,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry.	SM			
			24.0							
25			26.0			@25' Same as 20'.				
			29.0			30.0				
30						Continued Next Page				

SB/MW#: GP-21
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			**Sandy silt:** (0,15,80,15); brown (10YR 4/3); non-plastic; stiff; dry.	ML			
			34.0							
35			36.0			@35' **Sandy silt:** (0,23,70,7); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 **Sand:** (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: GP-22
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Mod 580B
SAMPLING DATE(S) 12-27-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silty sand: (0,60,40,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							Backfilled with Hydrated Bentonite Granules
			9.0			10.0				
10			11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
			14.0			15.0				
15			16.0			Silt: (0,5,95,0); brown (7.5YR 5/4); non-plastic; stiff; damp.	ML			
			19.0							
20			21.0			@20' Clayey Silt: (0,0,90,10); light brown (7.5YR 6/4); low plasticity; stiff; dry; odorous.				
			24.0							
25			26.0			Silt: (0,5,90,5); brown; (7.5YR 5/4); low plasticity; stiff; dry.				
			29.0							
30						Continued Next Page				

SB/MW#: GP-22
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			@30' Sandy silt: (0,15,80,5); brown (10YR 4/3); non-plastic; stiff; dry.				
			34.0							
35			36.0			@35' Sandy silt: (0,25,70,5); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 Sand: (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: GP-23
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Mod 580B
SAMPLING DATE(S) 12-27-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0				
						Silty sand: (0,60,40,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							Backfilled with Hydrated Bentonite Granules
			9.0			10.0				
10			11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
			14.0			15.0				
15			16.0			Silt: (0,5,95,0); brown (7.5YR 5/4); non-plastic; stiff; damp.	ML			
			19.0							
20			21.0			@20' Clayey silt: (0,0,90,10); light brown (7.5YR 6/4); low plasticity; stiff; dry; odorous.				
			24.0							
25			26.0			Silt: (0,5,90,5); brown; (7.5YR 5/4); low plasticity; stiff; dry.				
			29.0							
30						Continued Next Page				

SB/MW#: GP-23
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			@30' Sandy silt: (0,15,80,5); brown (10YR 4/3); non-plastic; stiff; dry.				
			34.0							
35			36.0			@35' Sandy silt: (0,25,70,5); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 Sand: (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: GP-24
#D-
Page 1 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Mod 580B
SAMPLING DATE(S) 12-27-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			0.0							
						Silty sand: (0,60,40,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp.	SM			
5			4.0 6.0							Backfilled with Hydrated Bentonite Granules
			9.0							
10			10.0 11.0			Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp.	SP			
			14.0							
15			15.0 16.0			Silt: (0,5,95,0); brown (7.5YR 5/4); non-plastic; stiff; damp.	ML			
			19.0							
20			21.0			@20' Clayey silt: (0,0,90,10); light brown (7.5YR 6/4); low plasticity; stiff; dry; odorous.				
			24.0							
25			26.0			Silt: (0,5,90,5); brown; (7.5YR 5/4); low plasticity; stiff; dry.				
			29.0							
30						Continued Next Page				

SB/MW#: GP-24
#D-
Page 2 of 2
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
			31.0			@30' Sandy silt: (0,15,80,5); brown (10YR 4/3); non-plastic; stiff; dry.				
35			34.0 36.0			@35' Sandy silt: (0,25,70,5); brown (10YR 4/3); non-plastic; stiff; damp.				
			39.0							
40			41.0			40.0				
						41.0 Sand: (5,95,0,0); dark gray (salt and pepper) (2.5Y 4/1); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			T.D. = 41'
45										
50										
55										
60										
65										

SB/MW#: MB-1
#D- 15591-93
Page 1 of 2
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION _____ MONITORING DEVICE PID
SAMPLING DATE(S) 12-29-95 START 7:15 AM FINISH 9:00 AM
SAMPLING METHOD CA MOD SPLIT SPOON SUBCONTRACTOR & EQUIPMENT BC2 Environmental
MEMO Hand Augered 1st 5 feet.

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0 Dirt surface.				
5	5-8-16		5.0 6.5	-	25	@5' sandy silt: (0,30,60,10); strong brown (7.5Yr 4/6); (100% medium); dense; damp.				8" Diameter Borehole
10	18-22-27		10.0 11.5	-	85					Backfilled with Hydrated Bentonite Chips
15	16-22-29		15.0 16.5	-	117	@15' Clayey silt: (0,0,90,10); olive brown (2.5Y 4/4); low plasticity; dense; dry to damp.	ML			
20	15-21-27		20.0 21.5	-	40	@20' Silt: (0,0,100,0); light olive brown (2.5Y 5/4); medium dense; dry.				
						25.0				
25	14-25-30		25.0 26.5	MB-1-25	151	Silt and clay: (0,0,50,50); olive brown (2.5Y 4/3); medium to low plasticity; damp.	ML/ CL			
						30.0				
30						Continued Next Page				

SB/MW#: MB-1
#D- 15591-93
Page 2 of 2
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
	16-24-29		30.0 31.5	MB-1-30	79	Silt: (0,0,95,5); dark yellowish brown (10YR 4/4); medium dense; damp.	ML			
35	15-27-30		35.0 36.5	MB-1-35	94					
40	15-21-25		40.0 41.5	MB-1-40	72	@40' Micaceous.				
45	17-21-50		45.0 46.5	MB-1-45	21	45.0 Sand: (5,90,5,0); olive brown (2.5Y 4/2); (25% very coarse, 60% medium, 15% fine); moderate graded; dense; damp.	SP			
50	25-50		50.0 51.5	MB-1-50	22					
55	17-23-35		55.0 56.5	MB-1-55	17	@55' Becomes coarser.				
60	16-21-31		59.0 60.5	MB-1-59	11	59.0 Silty sand: (10,80,10,0); very dark gray (2.5Y 3/1); (50% very coarse, 30% coarse; 20% fine); angular; moist to damp. 60.5	SM			T.D. = 60.5'
65										

SB/MW#: MB-2
#D- 15594-96
Page 1 of 2
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION _____ MONITORING DEVICE PID
SAMPLING DATE(S) 12-29-95 START 9:15 AM FINISH 11:00 AM
SAMPLING METHOD CA MOD SPLIT SPOON SUBCONTRACTOR & EQUIPMENT BC2 Environmental
MEMO Hand Augered 1st 5 feet.

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
0						0.0 Dirt surface.				
5	15-21-30		5.0 6.5	-	27	@5' Silt: (0,0,98,2); dark yellowish brown (7.5YR 3/4); non-plastic; medium dense; damp.	ML			8" Diameter Borehole
10	17-20-23		10.0 11.5	-	132	@10' Very dark grayish brown (2.5Y 3/2).				Backfilled with Hydrated Bentonite Chips
15	14-19-24		15.0 16.5	-	1169 996	@15' Strong solvent odor; 1 1/2 thick black layer at 16.0' looks like solvent; 10% clay content.				
20	15-23-25		20.0 21.5	-	140	@20' Silt: (0,0,100,0); olive gray (5Y 5/2).				
25	17-22-25		25.0 26.5	MB-2-25	170	@25' Light olive brown (2.5Y 5/3); micaceous.				
30						*Continued Next Page*				

SB/MW#: MB-2
#D- 15594-96
Page 2 of 2
Sampler: T. Overturf

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
	20-25-50		30.0 31.5	MB-2-30	76					
35	20-27-30		35.0 36.5	MB-2-35	167					
						40.0				
40	35-50		40.0 41.5	MB-2-40	22	Silty sand: (0,95,5,0); olive gray (5Y 5/2); (100% fine sand); dense; damp.	SM			
						45.0				
45	21-26-50		45.0 46.5	MB-2-45	13	Sand: (5,90,5,0); dark gray (2.5Y 4/1); (35% very coarse, 35% coarse, 30% medium to fine); damp.	SP			
50	21-50		50.0 51.5	MB-2-50	0.7					
55	19-25-30		55.0 56.5	MB-2-55	16	@55' Becomes coarser.				
						60.5				
60	18-22-27		60.0 61.5	MB-2-59	31					T.D. = 60.5'
65										

SB/MW#: MACRO
#D-
Page 1 of 3
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs
ELEVATION MONITORING DEVICE PID (OVM) Model 580B
SAMPLING DATE(S) 12-22-95 START FINISH
SAMPLING METHOD SUBCONTRACTOR & EQUIPMENT Vironex - Geoprobe
MEMO Continuous core.

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						0.0 Silty sand: (2,58,40,0); dark brown (7.5YR 3/3); (5% coarse, 20% medium, 50% fine, 25% very fine sand); well-graded; medium; dense; dry to damp.	SM			
						4.0 Sandy silt/Silty sand: (0,50,50,0); dark brown (7.5YR 3/2); (5% medium, 45% fine, 50% very fine sand); poorly graded; medium dense; damp; odorous.	SM/ ML			
5										Backfilled with Hydrated Bentonite Granules
10						10.0 Sand: (0,90,10,0); dark brown (7.5YR 3/2); (10% medium, 90% fine to very fine sand); poorly graded; medium dense; damp; odorous.	SP			
						12.5 Sand: (0,100,0,0); brown (7.5YR 4/3); (60% medium, 20% fine, 20% very fine sand); well graded; medium dense to dense; damp; odorous.	SW			
15						Continued Next Page				

SB/MW#: MACRO
#D-
Page 2 of 3
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						15.5				
						16.0 Silt: (0,5,95,0); brown (7.5YR 5/4); non-plastic; stiff; damp; odorous.	ML			
						16.5 Silty sand: (0,70,30,0); dark grayish brown (10YR 4/2); (100% fine to very fine sand); poorly graded; dense; dry; odorous.	SM / SP			
20						20.0 Sand: (0,95,5,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry. (Silt on the bottom tip approx 1"); odorous.	SM			
						23.0 Silty sand: (0,70,30,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry; odorous.	ML			
						24.0 Clayey silt: (0,0,90,10); light brown (7.5YR 6/4); low plasticity; stiff; dry; odorous.	SM			
25						Silty sand: (0,70,30,0); brown (7.5YR 4/4); (100% fine to very fine sand); poorly graded; dense; dry; odorous.				
						29.0 Clayey silt: (0,0,90,10); brown (7.5YR 5/4); low plasticity; stiff; dry; odorous.	ML			
30						30.0 Sandy silt: (0,15,80,5); brown (10YR 4/3); non-plastic; stiff; dry; little recovery; odorous.	ML			

Continued Next Page

SB/MW#: MACRO
#D-
Page 3 of 3
Sampler: E. Ferguson

SOIL DRILLING LOG

PROJECT Mobil Jalk Fee LOCATION 10607 Norwalk Blvd., Santa Fe Springs

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu Reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Class.	Graphic Log	Sample Depth	Borehole Abandonment/ Well Construction Details
						33.0				
						Sandy silt: (0,28,70,2); brown (10YR 4/3); non-plastic; stiff; damp.	ML			
						34.5				
35						Sandy silt: (0,23,70,7); brown (10YR 4/3); non-plastic; stiff; damp.	ML			
						37.0				
						Silty sand: (5,75,20,0); dark grayish brown (2.5Y 4/2); (25% coarse to very coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SM			
						39.0				
40						Sand: (5,95,0,0); dark gray (2.5Y 4/1); (salt and pepper); (25% very coarse to coarse, 50% medium, 25% fine sand); well graded; dense; damp.	SW			
						42.0				T.D. = 42'
45										
50										

Appendix C

Aerial Photograph Review Report

McLaren® Hart
ENVIRONMENTAL ENGINEERING CORPORATION

January 29, 1996

Mr. Tom Walker
Senior Petroleum Engineer
Mobil Exploration and Producing U.S. Inc.
10735 South Shoemaker Avenue
Santa Fe Springs, CA 90670

RE: AERIAL PHOTOGRAPH REVIEW OF THE JALK FEE PROPERTY LOCATED AT 10607 NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA

Dear Mr. Walker:

This report summarizes McLaren/Hart's recent aerial photograph review for the Jalk Fee Property located at 10607 Norwalk Boulevard, Santa Fe Springs, California. This work was performed as part of the change order entitled "Change Order for Mobil Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California" dated December 19, 1995. The following are the results of the aerial photograph review conducted during the weeks of December 11 and 18, 1995.

Historical property use information was derived from a review of historical aerial photographs obtained from McLaren/Hart's files and available records at UCLA and Whittier College. Most photographic records were taken at altitudes that make the observations of buildings clear, although, smaller features could not be defined.

1927 (C-278-D8; McLaren/Hart)

It should be noted that the clarity of the aerial photograph was poor.

The subject site was orchards with one long and one short rectangular building on the west side of the subject site adjacent to an oil derrick. There appeared to be two additional oil derricks in the central portion and two ASTs on the southeast side of the subject site.

The property to the north appeared to have some ASTs and oil derricks.

The property to the south was orchards.

To the east of the subject site was Norwalk Boulevard, across which appeared to be undeveloped land.

The property to the west was orchards with approximately 16 ASTs further west.

1927 (113-561, -562 & -563; Whittier College)

The following details were visible in this aerial photograph that weren't distinguishable on the previous aerial:

- Two buildings were noted in the northeast portion of the subject site;
- Four ASTs and two buildings were noted in the southeast portion of the subject site;
- There were dark stains present on the soil adjacent to the two oil derricks that were furthest east and west on the subject site;
- Buildings were noted adjacent to the oil derricks located on the east and center areas of the subject site;
- The property to the north was developed with approximately 6 oil derricks along the center of the lot, approximately 2 to 3 ASTs in the southwest corner, 5 ASTs in the northwest portion of the lot, a few buildings in the center and a few buildings in the northeast corner. There were two dark stains located to the west of the ASTs in the southwest corner of the lot;
- There were approximately 3 buildings in the northeast corner of the property located to the south of the subject site;
- Approximately 2 ASTs and 2 oil derricks were noted on the property to the east of the subject site;
- Oil derricks were noted on the property to the west of the subject site.

1928 (C-278-D7; McLaren/Hart)

The subject site and surrounding properties appeared similar to the 1927 aerial photographs (113-561, -562 & -563; Whittier).

1928 (C300 M228; McLaren/Hart)

It should be noted that the clarity of this aerial photograph was poor.

The following changes were noted on the subject site:

- The subject site was developed with approximately 10 ASTs in the southeast corner;
- There was a dark rectangular area in the middle of the lot on both the eastern and western halves of the subject site;
- There appeared to be a rectangular building in the center of the subject site with two ASTs to the north of this building;
- There appeared to only one structure located in the northeast corner of the property located to the south of the subject site;

1928 (C300 K353; Whittier College)

The following details were visible in this aerial photograph that weren't distinguishable on the previous aerial:

- Two dark stains were noted to the east of the ASTs in the southeast corner of the subject site;
- There appeared to be two additional buildings located in the northeast corner of the subject site;
- There appeared to be a structure in the southwest corner of the subject site;
- Approximately 7 ASTs were noted in the northeast section and approximately 7 to 8 ASTs were noted in the northwest section of the property located to the north of the subject site;
- Approximately 5 ASTs were noted on the property located to the east of the subject site.

1928 (C300 K 379; Whittier College)

The subject site and surrounding properties appeared similar to the other 1928 aerial photographs, except that it appeared there were two structures along the southern border (in the center) of the subject site.

1928 (C278-D6, -D7 & -D8; Whittier College)

The subject site and surrounding properties appeared similar to the previous 1928 aerial photographs.

April 28, 1938 (5147-6 & -7; Whittier College)

The subject site was developed with 2 structures in the northeast corner with a pond/lagoon to the south, a building further south, and an oil derrick to the east. On the northern border in the center and western portion of the lot there was an oil derrick with a building to the east of each derrick. On the east side of the lot towards the south there were 3 small buildings with 6 ASTs to the west; it appeared that there was a pipeline to the south of the ASTs. This area also appeared to be divided into 10 bermed sections.

The property to the north of the subject site was developed with 7 ASTs in the southwest corner, 6 ASTs in the northwest corner, 5 ASTs in the center towards the east and two ponds/lagoons in the center of the lot. There also appeared to be a rectangular structure and a circular structure in the southeast corner of the lot.

The property to the south was orchards. The building in the northeast corner was no longer visible.

To the east of the subject site was Norwalk Boulevard, across which were a few small buildings, approximately 3 to 5 ASTs and an oil derrick with a building adjacent to the derrick.

The property to the west was graded with a few oil derricks.

January 1, 1945 (C-9250 75; McLaren/Hart)

The subject site was developed with buildings in the northeast corner; the number of buildings was not distinguishable. There were approximately three to five ASTs in the northwest corner of the subject site. There were also two oil derricks on the subject site; one was located in the center of the east side of the lot and the other was located in the northwest corner adjacent to the ASTs. There also appeared to be two small buildings next to the ASTs; one to the north and one to the east.

The property to the north had approximately three ASTs in the southeast corner of the property and twelve ASTs on the west side of the property, six of which were located along the southern property line. There were also two oil derricks on the east side and approximately two to three oil derricks on the west side of the property.

The property to the south was developed with approximately four oil derricks and a few buildings.

To the east of the subject site was Norwalk Boulevard across which was approximately two to three ASTs and one oil derrick.

To the west of the subject site were a few small buildings.

January 1, 1945 (C-9250-74, -75 & -76 and C-9250-97 & -98; Whittier College)

The subject site and surrounding properties appeared similar to the other January 1945 aerial photograph. However, it should be noted that these aerials did not cover the western portion of the subject site or the properties to the west of the subject site.

June 18, 1947 (C-11351 #8-67; McLaren/Hart)

The subject site and immediate surrounding areas appeared similar to the January 1945 aerial photographs.

February 8, 1949 (C-13373-2-59, -60 & -84; Whittier College)

The subject site and immediate surrounding areas appeared similar to the June 1947 aerial photograph.

November 11, 1949 (E63-8, -9 & -10; UCLA)

The subject site and immediate surrounding areas appeared similar to the February 1949 aerial photograph.

January 13, 1950 (0-11086; UCLA)

The subject site remained the same as in the 1940s aerial photographs with the following exceptions:

- There appeared to be four oil derricks in this aerial photograph, instead of two, and
- A building was visible to the north of the oil derrick located in the north central portion of the subject site.

The surrounding properties also remained similar with the exception of additional oil derricks.

December 24, 1950 (11793 & 11794; UCLA)

The subject site and surrounding properties appeared similar to the January 1950 aerial photograph.

December 24, 1950 (11784-63; UCLA)

The subject site and surrounding properties appeared similar to the January 1950 aerial photograph. However, it should be noted that the aerial photograph did not cover the western portion of the subject site or the properties to the west of the subject site.

January 7, 1951 (E63-12, -14, -15 & -16; UCLA)

The subject site and the surrounding properties appeared similar to the 1950 aerial photographs with the following exceptions:

- There were several dark spots in the center of the subject site and six ASTs were visible in the northwest corner of the subject site.
- It appeared that there were two ponds/lagoons (dark rectangles) on the property to the north of the subject site; one was located in the middle of the western portion of the lot and the other was located in the middle of the eastern portion of the lot.

May 8, 1953 (C-19375-6-44, -45 & -46 and C-19400-2-22, -23, -24 and C-19400-1-17; Whittier College)

The subject site was developed with 4 buildings in the northeast corner and 4 ASTs in the northwest corner of the subject site. There were approximately 2 oil derricks along the southern boundary and one oil derrick along the northern boundary.

The surrounding area appeared similar to the January 1951 aerial photograph.

October 19, 1953 (AXJ-1952-13K-148; McLaren/Hart)

The subject site and surrounding area appeared similar to the May 1953 aerial photograph.

August 30, 1954 (E-63-58 & -59; UCLA)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

August 9, 1955 (C-22218A-1-36; Whittier College)

The subject site appeared similar to the October 1953 aerial photograph except that a structure was observed towards the center of the lot to the west of the existing buildings.

The surrounding properties appeared similar to the May 1953 aerial photograph except that there appeared to be more buildings in the southeast portion of the property located south of the subject site.

August 15, 1955 (C-2221813-40 & -79; Whittier College)

The building in the center of the subject site towards the west of the buildings in the northeast was more visible. There was a chain linked fence around the building with vacant land to the west of the building (within the fence).

The remainder of the subject site and the surrounding properties appeared similar to the August 9, 1955 aerial photograph.

September 1955 (C-22246-1-20, -21, -26 & -27; Whittier College)

The subject site and surrounding properties appeared similar to the other 1955 aerial photographs.

July 15, 1956 (22555-20-42; McLaren/Hart)

The subject site was developed with buildings in the northeast corner, ASTs in the northwest corner and a building in the center of the lot on the east side of the lot. There also appeared to be a few buildings along the northern boundary in the center of the lot. On the western half of the lot were approximately three oil derricks.

The property to the north was mainly developed on the western half. There were 7 ASTs on the southwest corner of the lot (adjacent to the subject site). There were also a few oil derricks on the lot.

The property to the south was partially developed with a few buildings in the central portion of the lot. There were also a few oil derricks on the lot.

To the east of the subject site was Norwalk Boulevard, across which were a few small structures.

To the west of the subject site were a few buildings on a mainly undeveloped lot. There were also a few oil derricks on the lot.

August 24, 1956 (C-22596-1-56 & -57; Whittier College)

The subject site and the surrounding properties appeared similar to the July 1956 aerial photograph.

May 4, 1957 (84-V-1-5; McLaren/Hart)

The subject site and immediate surrounding properties appeared similar to the August 1956 aerial photograph.

January 17, 1958 (C-23023 #5-14; McLaren/Hart)

It should be noted that the features on the subject site and immediate surrounding properties were not clear due to the scale of the aerial photograph.

The subject site and immediate surrounding areas appeared similar to the May 1957 aerial photograph with the following exceptions:

- The building that was visible in the center of the eastern portion of the subject site and the buildings located along the northern boundary of the subject site in the 1957 aerial photograph were no longer visible;
- The eastern ⅔ of the subject site was graded; and
- There appeared to be 6 instead of 7 ASTs located in the southwest corner of the property located to the north of the subject site.

September 8, 1958 (C-23224-1-93 & -94 and C-23224-2-235 & -236; Whittier College)

The subject site and surrounding properties appeared similar to the January 1958 aerial photograph with the exception that the fenced in structure that was noted in the August 15, 1955 aerial photograph was again visible in this aerial photograph. Also, within this fenced in area, there was a dark stain on the soil adjacent to the building.

September 24, 1958 (E-63-108; UCLA)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

1958 (C-23023-5-15; Whittier College)

Based on the scale and angle of the aerial photograph, individual features were hard to distinguish on the subject site as well as the surrounding properties.

December 23, 1960 (E-63-131 & -132; UCLA)

The subject site was developed with five buildings in the northeast corner of the lot. An oil derrick was visible near the buildings. Also, there were approximately 5 ASTs in the northwest corner of the subject site.

The property to the north was developed on both the east and west side. In the center of this lot, there was a rectangular building with approximately 4 stack pipes extending out of the roof. The lagoon/pond was visible on the east side of the property. There were also approximately 6 ASTs along the southern boundary in the southwest portion of the lot and approximately 5 ASTs along the northern boundary in the northwest portion of the lot. There were approximately 4 oil derricks on the property.

The property to the south was mainly undeveloped or agricultural land with four small structures in the center of the lot and several buildings (approximately 5 to 7) in the southeast corner of the lot.

To the east of the subject site was Norwalk Boulevard, across which were approximately 2 ASTs and a dark rectangular stain on the soil.

The property to the west of the subject site was an oil field.

March 13, 1962 (157V98; McLaren/Hart)

The subject site appeared similar to the December 1960 aerial photograph.

There were thirteen ASTs on the property to the north with seven of them on the south side bordering the subject site. There were also two oil rigs located on the western half of the property. In the center of the western half, there was a dark rectangular stain on the soil that resembled a pond or lagoon. On the eastern half of this property, there were two adjacent stains on the soil that resembled a pond or lagoon.

The property to the south was mainly undeveloped or agricultural land with a few small buildings in the center of the property and several buildings in the southeast corner of the property.

The property to the east (passed Norwalk Boulevard) is mainly undeveloped land with a few small buildings and between one and two ASTs.

To the west of the subject site was oil fields.

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 1.0-0.0
Sample Number: MH-10-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-31/35663-8414
Date/Time Sampled: 12/21/95 14:50
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7543.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-31/35663-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	105	70 - 121
Toluene-d8	116	81 - 117
Bromofluorobenzene	104	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TG Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 5.0-0.0
Sample Number: MH-10-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-32/35665-8414
Date/Time Sampled: 12/21/95 15:00
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7544.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/27/95
Vinyl Chloride	BRL	10	1	12/27/95
Bromomethane	BRL	10	1	12/27/95
Chloroethane	BRL	10	1	12/27/95
Trichlorofluoromethane	BRL	10	1	12/27/95
Acetone	BRL	25	1	12/27/95
1,1-Dichloroethene	BRL	5.0	1	12/27/95
Methylene Chloride	BRL	5.0	1	12/27/95
Carbon Disulfide	BRL	5.0	1	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/27/95
1,1-Dichloroethane	BRL	5.0	1	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/27/95
Chloroform	BRL	5.0	1	12/27/95
1,2-Dichloroethane	BRL	5.0	1	12/27/95
2-Butanone	BRL	25	1	12/27/95
1,1,1-Trichloroethane	BRL	5.0	1	12/27/95
Carbon Tetrachloride	BRL	5.0	1	12/27/95
Benzene	BRL	5.0	1	12/27/95
Trichloroethene	BRL	5.0	1	12/27/95
1,2-Dichloropropane	BRL	5.0	1	12/27/95
Bromodichloromethane	BRL	5.0	1	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/27/95
1,1,2-Trichloroethane	BRL	5.0	1	12/27/95
Dibromochloromethane	BRL	5.0	1	12/27/95
Bromoform	BRL	5.0	1	12/27/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-32/35665-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/27/95
Toluene	BRL	5.0	1	12/27/95
2-Hexanone	BRL	25	1	12/27/95
Tetrachloroethene	BRL	5.0	1	12/27/95
Chlorobenzene	BRL	5.0	1	12/27/95
Ethyl benzene	BRL	5.0	1	12/27/95
m & p Xylene	BRL	5.0	1	12/27/95
o-Xylene	BRL	5.0	1	12/27/95
Styrene	BRL	5.0	1	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/27/95
1,3-Dichlorobenzene	BRL	5.0	1	12/27/95
1,4-Dichlorobenzene	BRL	5.0	1	12/27/95
1,2-Dichlorobenzene	BRL	5.0	1	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	110	70 - 121
Toluene-d8	107	81 - 117
Bromofluorobenzene	109	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: JS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-10 10.0-0.0
Sample Number: MH-10-3
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-33/35666-8414
Date/Time Sampled: 12/21/95 15:05
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7556.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-33/35666-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates		% Recovery	Limits
1,2-Dichloroethane-d4	-	95	70 - 121
Toluene-d8		105	81 - 117
Bromofluorobenzene		100	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 1.0-0.0
Sample Number: MH-11-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-37/35667-8414
Date/Time Sampled: 12/21/95 16:05
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7554.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-37/35667-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	96	70 - 121
Toluene-d8	106	81 - 117
Bromofluorobenzene	96	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 5.0-0.0
Sample Number: MH-11-2
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-38/35668-8414
Date/Time Sampled: 12/21/95 16:10
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7546.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-38/35668-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	102	70 - 121
Toluene-d8	105	81 - 117
Bromofluorobenzene	100	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TG Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: MH-11 10.0-0.0
Sample Number: MH-11-3
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-39/35669-8414
Date/Time Sampled: 12/21/95 16:15
Matrix: Soil (S)
Batch Number: 4895
% Moisture: NA
Instrument/Column: MS04/RTX-502.2
Data File: P7547.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-39/35669-8414

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	109	70 - 121
Toluene-d8	113	81 - 117
Bromofluorobenzene	110	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/27/95 MB/36223
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

Lab ID: 36223-MB /8414
Matrix: Soil
Batch Number: 4895
Instrument/Column: MS04/RTX-502.2
Data File: P7533.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Date Analyzed
Chloromethane	BRL	10	12/27/95
Vinyl Chloride	BRL	10	12/27/95
Bromomethane	BRL	10	12/27/95
Chloroethane	BRL	10	12/27/95
Trichlorofluoromethane	BRL	10	12/27/95
Acetone	BRL	25	12/27/95
1,1-Dichloroethene	BRL	5.0	12/27/95
Methylene Chloride	BRL	5.0	12/27/95
Carbon Disulfide	BRL	5.0	12/27/95
trans-1,2-Dichloroethene	BRL	5.0	12/27/95
1,1-Dichloroethane	BRL	5.0	12/27/95
cis-1,2-Dichloroethene	BRL	5.0	12/27/95
Chloroform	BRL	5.0	12/27/95
1,2-Dichloroethane	BRL	5.0	12/27/95
2-Butanone	BRL	25	12/27/95
1,1,1-Trichloroethane	BRL	5.0	12/27/95
Carbon Tetrachloride	BRL	5.0	12/27/95
Benzene	BRL	5.0	12/27/95
Trichloroethene	BRL	5.0	12/27/95
1,2-Dichloropropane	BRL	5.0	12/27/95
Bromodichloromethane	BRL	5.0	12/27/95
trans-1,3-Dichloropropene	BRL	5.0	12/27/95
cis-1,3-Dichloropropene	BRL	5.0	12/27/95
1,1,2-Trichloroethane	BRL	5.0	12/27/95
Dibromochloromethane	BRL	5.0	12/27/95
Bromoform	BRL	5.0	12/27/95
4-Methyl-2-Pentanone	BRL	25	12/27/95
Toluene	BRL	5.0	12/27/95
2-Hexanone	BRL	25	12/27/95
Tetrachloroethene	BRL	5.0	12/27/95
Chlorobenzene	BRL	5.0	12/27/95

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 36223-MB /8414 1559

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Date Analyzed
Ethyl benzene	BRL	5.0	12/27/95
m & p Xylene	BRL	5.0	12/27/95
o-Xylene	BRL	5.0	12/27/95
Styrene	BRL	5.0	12/27/95
1,1,2,2-Tetrachloroethane	BRL	5.0	12/27/95
1,3-Dichlorobenzene	BRL	5.0	12/27/95
1,4-Dichlorobenzene	BRL	5.0	12/27/95
1,2-Dichlorobenzene	BRL	5.0	12/27/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	103	70 - 121
Toluene-d8	108	81 - 117
Bromofluorobenzene	105	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/28/95 MB/36222
Date Prepared: NA
Initial Wt./Volume: 5 grams
Final Volume: 5 mL

Lab ID: 36222-MB /8414
Matrix: Soil
Batch Number: 4895
Instrument/Column: MS04/RTX-502.2
Data File: P7561.d

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Date Analyzed
Chloromethane	BRL	10	12/28/95
Vinyl Chloride	BRL	10	12/28/95
Bromomethane	BRL	10	12/28/95
Chloroethane	BRL	10	12/28/95
Trichlorofluoromethane	BRL	10	12/28/95
Acetone	BRL	25	12/28/95
1,1-Dichloroethene	BRL	5.0	12/28/95
Methylene Chloride	BRL	5.0	12/28/95
Carbon Disulfide	BRL	5.0	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	12/28/95
1,1-Dichloroethane	BRL	5.0	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	12/28/95
Chloroform	BRL	5.0	12/28/95
1,2-Dichloroethane	BRL	5.0	12/28/95
2-Butanone	BRL	25	12/28/95
1,1,1-Trichloroethane	BRL	5.0	12/28/95
Carbon Tetrachloride	BRL	5.0	12/28/95
Benzene	BRL	5.0	12/28/95
Trichloroethene	BRL	5.0	12/28/95
1,2-Dichloropropane	BRL	5.0	12/28/95
Bromodichloromethane	BRL	5.0	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	12/28/95
1,1,2-Trichloroethane	BRL	5.0	12/28/95
Dibromochloromethane	BRL	5.0	12/28/95
Bromoform	BRL	5.0	12/28/95
4-Methyl-2-Pentanone	BRL	25	12/28/95
Toluene	BRL	5.0	12/28/95
2-Hexanone	BRL	25	12/28/95
Tetrachloroethene	BRL	5.0	12/28/95
Chlorobenzene	BRL	5.0	12/28/95

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 36222-MB /8414 1200

Analyte	Result ug/Kg (ppb)	Reporting Limit ug/Kg (ppb)	Date Analyzed
Ethyl benzene	BRL	5.0	12/28/95
m & p Xylene	BRL	5.0	12/28/95
o-Xylene	BRL	5.0	12/28/95
Styrene	BRL	5.0	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	12/28/95
1,3-Dichlorobenzene	BRL	5.0	12/28/95
1,4-Dichlorobenzene	BRL	5.0	12/28/95
1,2-Dichlorobenzene	BRL	5.0	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	98	70 - 121
Toluene-d8	108	81 - 117
Bromofluorobenzene	104	74 - 121

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/27/95 LCS/36220
Lab ID: 36220-LCS /8414
Date Prepared: NA
Initial Wt./Volume: 5 grams
Matrix: Soil
Units: ug/Kg (ppb)
Final Volume: 5 mL
Batch Number: 4895
LCS Date Analyzed: 12/27/95
LCSD Date Analyzed: NA
Instrument/Column: /RTX-502.2
Data File: P7534.d

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	RPD
1,1-Dichloroethene	0	50	44	88	NA	NA	NA	59-172	≤22
Benzene	0	50	53	105	NA	NA	NA	66-142	≤21
Trichloroethene	0	50	47	94	NA	NA	NA	62-137	≤24
Toluene	0	50	54	107	NA	NA	NA	59-139	≤21
Chlorobenzene	0	50	57	114	NA	NA	NA	60-133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
1,2-Dichloroethane-d4	50	53	107	NA	NA	70-121
Toluene-d8	50	55	110	NA	NA	81-117
Bromofluorobenzene	50	56	112	NA	NA	74-121

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/28/95 LCS/36221
Lab ID: 36221-LCS /8414
Date Prepared: NA
Initial Wt./Volume: 5 grams
Matrix: Soil
Units: ug/Kg (ppb)
Final Volume: 5 mL
Batch Number: 4895
LCS Date Analyzed: 12/28/95
LCSD Date Analyzed: NA
Instrument/Column: /RTX-502.2
Data File: P7553.d

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	Acceptance Limits RPD
1,1-Dichloroethene	0	50	41	83	NA	NA	NA	59-172	≤22
Benzene	0	50	52	104	NA	NA	NA	66-142	≤21
Trichloroethene	0	50	45	90	NA	NA	NA	62-137	≤24
Toluene	0	50	52	105	NA	NA	NA	59-139	≤21
Chlorobenzene	0	50	54	107	NA	NA	NA	60-133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
1,2-Dichloroethane-d4	50	52	104	NA	NA	70-121
Toluene-d8	50	54	109	NA	NA	81-117
Bromofluorobenzene	50	53	106	NA	NA	74-121

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Rinse Blank 1
Sample Number: RB-1
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 mL
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-16/35673-8414
Date/Time Sampled: 12/21/95 11:55
Matrix: Water (W)
Batch Number: 4897

Instrument/Column: MS02/RTX-502.2
Data File: V8777.d

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-16/35673-8414

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	100	76 - 114
Toluene-d8	98	88 - 110
Bromofluorobenzene	95	86 - 115

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

VOLATILE ORGANICS

Analytical Method: EPA 8240

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Trip Blank
Sample Number: Trip Blank
Date/Time Received: 12/22/95 9:00
Date Prepared: NA
Initial Wt./Volume: 5 mL
Final Volume: 5 mL

SDG #: 13194
Project Number: 030601414002
Lab ID: 13194-43/35680-8414
Date/Time Sampled: 12/21/95 16:45
Matrix: Water (W)
Batch Number: 4897

Instrument/Column: MS02/RTX-502.2
Data File: V8776.d

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
Chloromethane	BRL	10	1	12/28/95
Vinyl Chloride	BRL	10	1	12/28/95
Bromomethane	BRL	10	1	12/28/95
Chloroethane	BRL	10	1	12/28/95
Trichlorofluoromethane	BRL	10	1	12/28/95
Acetone	BRL	25	1	12/28/95
1,1-Dichloroethene	BRL	5.0	1	12/28/95
Methylene Chloride	BRL	5.0	1	12/28/95
Carbon Disulfide	BRL	5.0	1	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	1	12/28/95
1,1-Dichloroethane	BRL	5.0	1	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	1	12/28/95
Chloroform	BRL	5.0	1	12/28/95
1,2-Dichloroethane	BRL	5.0	1	12/28/95
2-Butanone	BRL	25	1	12/28/95
1,1,1-Trichloroethane	BRL	5.0	1	12/28/95
Carbon Tetrachloride	BRL	5.0	1	12/28/95
Benzene	BRL	5.0	1	12/28/95
Trichloroethene	BRL	5.0	1	12/28/95
1,2-Dichloropropane	BRL	5.0	1	12/28/95
Bromodichloromethane	BRL	5.0	1	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	1	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	1	12/28/95
1,1,2-Trichloroethane	BRL	5.0	1	12/28/95
Dibromochloromethane	BRL	5.0	1	12/28/95
Bromoform	BRL	5.0	1	12/28/95

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 13194-43/35680-8414

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor	Date Analyzed
4-Methyl-2-Pentanone	BRL	25	1	12/28/95
Toluene	BRL	5.0	1	12/28/95
2-Hexanone	BRL	25	1	12/28/95
Tetrachloroethene	BRL	5.0	1	12/28/95
Chlorobenzene	BRL	5.0	1	12/28/95
Ethyl benzene	BRL	5.0	1	12/28/95
m & p Xylene	BRL	5.0	1	12/28/95
o-Xylene	BRL	5.0	1	12/28/95
Styrene	BRL	5.0	1	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	1	12/28/95
1,3-Dichlorobenzene	BRL	5.0	1	12/28/95
1,4-Dichlorobenzene	BRL	5.0	1	12/28/95
1,2-Dichlorobenzene	BRL	5.0	1	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	100	76 - 114
Toluene-d8	102	88 - 110
Bromofluorobenzene	100	86 - 115

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/28/95 MB/36231
Date Prepared: NA
Initial Wt./Volume: 5 mL
Final Volume: 5 mL

Lab ID: 36231-MB /8414
Matrix: Water
Batch Number: 4897
Instrument/Column: MS02/RTX-502.2
Data File: V8763.d

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Date Analyzed
Chloromethane	BRL	10	12/28/95
Vinyl Chloride	BRL	10	12/28/95
Bromomethane	BRL	10	12/28/95
Chloroethane	BRL	10	12/28/95
Trichlorofluoromethane	BRL	10	12/28/95
Acetone	BRL	25	12/28/95
1,1-Dichloroethene	BRL	5.0	12/28/95
Methylene Chloride	BRL	5.0	12/28/95
Carbon Disulfide	BRL	5.0	12/28/95
trans-1,2-Dichloroethene	BRL	5.0	12/28/95
1,1-Dichloroethane	BRL	5.0	12/28/95
cis-1,2-Dichloroethene	BRL	5.0	12/28/95
Chloroform	BRL	5.0	12/28/95
1,2-Dichloroethane	BRL	5.0	12/28/95
2-Butanone	BRL	25	12/28/95
1,1,1-Trichloroethane	BRL	5.0	12/28/95
Carbon Tetrachloride	BRL	5.0	12/28/95
Benzene	BRL	5.0	12/28/95
Trichloroethene	BRL	5.0	12/28/95
1,2-Dichloropropane	BRL	5.0	12/28/95
Bromodichloromethane	BRL	5.0	12/28/95
trans-1,3-Dichloropropene	BRL	5.0	12/28/95
cis-1,3-Dichloropropene	BRL	5.0	12/28/95
1,1,2-Trichloroethane	BRL	5.0	12/28/95
Dibromochloromethane	BRL	5.0	12/28/95
Bromoform	BRL	5.0	12/28/95
4-Methyl-2-Pentanone	BRL	25	12/28/95
Toluene	BRL	5.0	12/28/95
2-Hexanone	BRL	25	12/28/95
Tetrachloroethene	BRL	5.0	12/28/95
Chlorobenzene	BRL	5.0	12/28/95

METHOD BLANK

VOLATILE ORGANICS

Analytical Method: EPA 8240

Lab ID: 36231-MB /8414 1324

Analyte	Result ug/L (ppb)	Reporting Limit ug/L (ppb)	Date Analyzed
Ethyl benzene	BRL	5.0	12/28/95
m & p Xylene	BRL	5.0	12/28/95
o-Xylene	BRL	5.0	12/28/95
Styrene	BRL	5.0	12/28/95
1,1,2,2-Tetrachloroethane	BRL	5.0	12/28/95
1,3-Dichlorobenzene	BRL	5.0	12/28/95
1,4-Dichlorobenzene	BRL	5.0	12/28/95
1,2-Dichlorobenzene	BRL	5.0	12/28/95

Surrogates	% Recovery	Limits
1,2-Dichloroethane-d4	94	76 - 114
Toluene-d8	101	88 - 110
Bromofluorobenzene	96	86 - 115

The cover letter and enclosures are integral parts of this report.

Approved by: TS Date: 1-3-96

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

VOLATILE ORGANICS

Analytical Method: EPA 8240

Sample ID: 12/28/95 LCS/36230
Lab ID: 36230-LCS /8414
Date Prepared: NA
Initial Wt./Volume: 5 mL
Matrix: Water
Units: ug/L (ppb)
Final Volume: 5 mL
Batch Number: 4897
LCS Date Analyzed: 12/28/95
LCSD Date Analyzed: NA
Instrument/Column: /RTX-502.2
Data File: V8765.d

Analyte	(a) Sample Conc.	(b) Spike Conc.	(c) Sample + Spike Conc.	(d) Spike Rec %	(e) Sample Dup. + Spike Conc.	(f) Spike Dup. Rec %	(g) RPD %	Acceptance Limits % Rec.	RPD
1,1-Dichloroethene	0	50	48	96	NA	NA	NA	61-145	≤14
Benzene	0	50	48	96	NA	NA	NA	76-127	≤11
Trichloroethene	0	50	48	96	NA	NA	NA	71-120	≤14
Toluene	0	50	48	97	NA	NA	NA	76-125	≤13
Chlorobenzene	0	50	49	98	NA	NA	NA	75-130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Surrogate	(h) Surr. Spike Conc.	(i) Sample + Surr. Spike Conc.	(j) Surr. Spike Rec %	(k) Sample Dup. + Surr. Spike Conc.	(l) Surr. Spike Dup. Rec %	Acceptance Limits
1,2-Dichloroethane-d4	50	54	108	NA	NA	76-114
Toluene-d8	50	50	100	NA	NA	88-110
Bromofluorobenzene	50	51	102	NA	NA	86-115

Surrogate % Recovery = j = (i-h) x 100
Surrogate Duplicate Recovery = l = (k/h) x 100

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-3-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/03/96

MBT Environmental Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

Master Builders Technologies

Date: January 3, 1996
LP #: 13167

Everett Ferguson
McLaren/Hart Environmental Engineering
16755 Von Karman Avenue
Irvine, CA 92714

Dear Mr. Ferguson:

Enclosed are the laboratory results for the samples submitted to MBT Environmental Laboratories on December 20, 1995, for the project *Mobil Jalk Fee*.

The report consists of the following sections:

1. Cover Page
2. Copy of Chain-of-Custody
3. General Narrative
4. Analytical and Quality Control Results

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing MBT Environmental Laboratories. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,

Chris Phillips
Project Coordinator

Enclosure: EDD

ANALYTICAL REPORT

LABORATORY PROJECT (LP) NUMBER 13167

MOBIL JALK FEE

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

	ARIZONA:	Hazardous Waste, #AZ0468 Waste Water, # AZ0468 Drinking Water, #AZ0468	OKLAHOMA:	Hazardous Waste, #9318 Waste Water, #9318
✓	CALIFORNIA:	Hazardous Waste, #1417 Waste Water, # 1417 Drinking Water, #1417 Mobile Lab, #2070	SOUTH CAROLINA:	Hazardous Waste, #87013 Waste Water, #87013
	CONNECTICUT:	Waste Water, #PH0799	TENNESSEE:	Underground Storage Tank
	FLORIDA:	Environmental Water, #E87298 CQAPP #930105	WASHINGTON:	Hazardous Waste, #C048
	KANSAS:	Hazardous Waste, #E-1167 Waste Water, #E-192 Drinking Water, #E-192	WISCONSIN:	Hazardous Waste, #999940920 Waste Water, #999940920
	NEW HAMPSHIRE:	Waste Water, #253195-B Drinking Water, #253195-A	USACOE:	Hazardous Waste Waste Water
	NEW JERSEY:	Waste Water, #44818	AFCEE	Hazardous Waste Waste Water
	NEW YORK:	Hazardous Waste, #11241 Waste Water, #11241 CLP, #11241		

(CN13167)

MW Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD 15995

SIDE 2 FOR COMPLETE INSTRUCTIONS

Project Name: MOBIL JALIS FEE
Project Number: 03.0601414.0002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13167 Storage ID: 4°-A 8
Sample Condition Upon Receipt: Temp: 2 °C Geiger:
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No
AIR BUBBLES: 2-021

Sample Disposal (check one)
☒ Laboratory Standard
☐ Other

Level of QC (see Side 2): ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B ☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in Analysis Method →

SAMPLE INFORMATION

ANALYSES REQUESTED

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s): #	Container(s): Type	Matrix Type	Pres. Type	TAT	8015 mod (Full Scan)	8020 BETX
1 13167-001	BC-71	12/19	1010	Bio Pile 2 cell 71	1 ft	1	BRASS	SOIL	NONE	2WK	X	X
2 002	BC-59		1025	Bio Pile 2 cell 59	1 ft	1	BRASS	SOIL	NONE	2WK	X	X
3 003	BC-76		1040	Bio Pile 2 cell 76	1 ft	1	BRASS	SOIL	NONE	2WK	X	X
4 004	BC-80		1055	Pile 2 cell 80				SOIL			X	X
5 005	BC-57		1110	Pile 2 cell 57							X	X
6 006	BC-67		1125	Pile 2 cell 67							X	X
7 007	BC-55		1155	Pile 2 cell 55							X	X
8 008	BC-27		1310	Pile 1 cell 27							X	X
9 009	BC-46		1325	Pile 1 cell 46							X	X
10 010	BC-25	12/19	1335	Pile 1 cell 25	1 ft	1	BRASS	SOIL	NONE	2WK	X	X

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
606
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150 (-7)
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivos
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPHD
TPHG
TSS
Turbidity
* Specify Total or Dissolved

SEND REPORT TO:
Company Name McLAREN HART
Client Name Everett Ferguson
Address 16755 Von KARMAN AVE.
IRVINE CA 92714
Phone 714 756 2667 Fax

BILL TO (if different):
Company Name
Address
PO #
Phone Fax

Special Instructions/Comments
8015 Full Scan
8020 BTEX

Sampler Name: MIKE WARRINER
Signature:
PPE Worn in Field: LEVEL D

Relinquished By: Mike Warriner — Date/Time: 12/19/95 1709
Received By or Method of Shipment/Shipment I.D.: FEDEX 8107 — Date/Time: 12/19/95 1645P

Relinquished By: EXPRESS IT — Date/Time:
Received By or Method of Shipment/Shipment I.D.: Cindy Nadimuthu — Date/Time: 12-20-95 0950

Relinquished By: — Date/Time:
Received By or Method of Shipment/Shipment I.D. — Date/Time

M Environmental Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

← SHIP 1 2 OF 3

CHAIN OF CUSTODY RECORD 15999

SIDE 2 FOR COMPLETE INSTRUCTIONS

Project Name: MOBIL JALK FEE
Project Number: 030601414.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13167 Storage ID: 124-A 8
Sample Condition Upon Receipt: Temp: 2 °C Geiger:
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No

Sample Disposal (check one)
[X] Laboratory Standard
[ ] Other

Level of QC (see Side 2): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6A [ ] 6B [ ] 6C [ ] 6D [ ] 6E [ ] 6F [ ] 7 [ ] 8 [ ] A

Write in Analysis Method →

ANALYSES REQUESTED

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Locator	Depth	#	Type	Matrix Type	Pres. Type	TAT	8015 mod (FS)	8020 BETX
1 13167-011	BC-2	12/19	1350	Bio Pile 1 Cell 2	1 ft	1	BRASS	soil	NONE	2 WK	X	X
2 012	BC-30	↓	1405	Bio Pile 1 Cell 30	↓	↓	↓	↓	↓	↓	X	X
3 013	BC-43		1415	Bio Pile 1 Cell 43							X	X
4 014	BC-21		1430	Bio Pile 1 Cell 21							X	X
5 015	BC-6		1440	Bio Pile 1 Cell 6							X	X
6 016	BC-12		1605	Pile 1 Cell 12							X	X
7 017	BC-15		1615	Pile 1 Cell 15							X	X
8 018	BC-17		1620	Pile 1 Cell 17							X	X
9 019	BC-40		1625	Pile 1 Cell 40							X	X
10 020	BC-4	12/19	1640	Pile 1 Cell 4	1 ft	1	BRASS	soil	None	2 WK	X	X

Common Analytical Methods: 413.1, 413.2 Long Method, 413.2 Short Method, 418.1 Long Method, 418.1 Short Method, 420.1, 502.2, 503E, 503.1, 524.2, 601, 602, 604, 608, 610, 624, 625, 8010, 8015, 8015 Mod., 8020, 8021, 8040, 8080, 8100, 8150, 8240, 8270, 8310, Acidity, Alkalinity, BTEX, Chloride, CLP (see Side 2), COD, Color, Conductivity, Corrosivity, Cyanide, Flashpoint, Fluoride, General Mineral, Hex. Chromium, Ion Balance, Metals (write specific metal & method #)*, Metals 6010*, Metals PP..., Metals Title 22: TTLC Level, STLC Level (see Side 2), Nitrate, Nitrite, Odor, Org. Lead, Org. Mercury, Percent Moisture, Percent Solid, Perchlorate, pH, Phosphates, Phosphorus, Sulfate, Sulfides, TCLP: VOA, Semivoa, Metals, Pesticide, TDS, Total Hardness, Total Solids, TPH/D, TPH/G, TSS, Turbidity

* Specify Total or Dissolved

SEND REPORT TO:
Company Name McLaren/Hart
Client Name Everett Ferguson
Address 16755 Von Karman Ave
Irvine CA 92714
Phone 714-756-2667 Fax

BILL TO (if different):
Company Name
Address
PO #
Phone Fax

Special Instructions/Comments
~~8015~~ 8015 - Full screen
8020 BTEX

Sampler Name	Signature	PPE Worn in Field	
Mike Warriner	[signature]	LEVEL D	12/19/95 445P

Relinquished By:	Date/Time	Received By or Method of Shipment/Shipment I.D.	Date/Time
Mike Warriner MW	12/19/95 1709	[signature] BARRINEAU 29101	12-19-95 1709
EXPRESS IT		Cindy N.	12-20-95 0950

Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD

Project Name: MOBIL JALK FEE
Project Number: 03.0601414.002
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 13167 *Storage ID:* 124-A, 8
Sample Condition Upon Receipt: Temp: 2 °C Geiger:
Custody Seals Present? Yes/No *Intact?* Yes/No *Samples Intact?* (Yes)/No

Sample Disposal (check one)
[X] Laboratory Standard
[ ] Other

Level of QC (see Side 2): [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6A [ ] 6B [ ] 6C [ ] 6D [ ] 6E [ ] 6F [ ] 7 [ ] 8 [ ] A

Write in Analysis Method →

ANALYSES REQUESTED: 8015 mod (G); 8020 BTEX

SAMPLE INFORMATION

	FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description: Locator	Description: Depth	Container(s) #	Container(s) Type	Matrix Type	Pres. Type	TAT	8015 mod (G)	8020 BTEX	
1	13167-021	TRIP BLANK	12/19	1645	—	—	1	40ml VOA	water	HCl	2wk	X	X	HOLD
2	↓	TRIP BLANK	12/19	1645	—	—	1	40ml VOA	water	HCl	2wk	X	X	HOLD
3														
4														
5														
6														
7														
8														
9														
10														

SEND REPORT TO:
Company Name: McLAREN/HART
Client Name: Everett Ferguson
Address: 16755 Von Karman Ave
Irvine CA 92714
Phone: 714-756-2667 Fax

BILL TO (if different):
Company Name
Address
PO #
Phone Fax

Special Instructions/Comments
CALL EVERETT FOR INSTRUCTIONS REGARDING TRIP BLANKS

Sampler Name: MIKE WARRINER
Signature: [signature]
PPE Worn in Field: LEVEL D
12/19/95 1645

Relinquished By: Mike Warriner [signature] Date/Time 12/19/95 1709
Received By or Method of Shipment/Shipment I.D.: [signature] Date/Time 12/19/95 1709

Relinquished By: EXPRESS IT Date/Time
Received By or Method of Shipment/Shipment I.D.: Cindy N. Date/Time 12-20-95 0950

Relinquished By: Date/Time
Received By or Method of Shipment/Shipment I.D. Date/Time

Common Analytical Methods
413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8060
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific metal & method #)*
Metals 6010*
Metals PP*
Metals Title 22:
TTLC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivoa
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

* Specify Total or Dissolve

GENERAL NARRATIVE

Comments:

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

Percent recoveries for laboratory control samples and matrix spikes have been calculated using unrounded concentration values. Therefore, percent recoveries reported may differ slightly from those obtained from the rounded concentration values which appear on the report.

EPA 8015 Modified - Fuel Fingerprinting:

For EPA 8015 Modified - Fuel Fingerprinting (GC), all peaks within the C7-C32 carbon range are compared to the standard which the peaks most closely resemble. Values reported are calculated based on the total area of the peaks in the carbon range of that standard.

The matrix spike/matrix spike duplicate RPDs flagged on the matrix spike data sheet are outside of advisory quality control limits, indicating possible sample matrix nonhomogeneity.

EPA 8020 BTEX:

Non-target analytes are present on the chromatograph for the following samples: 13167-6, 13167-12, 13167-15, 13167-17, and 13167-18.

Abbreviations and Definitions:

MB	*Method Blank* - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	*Laboratory Control Sample* - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	*Matrix Spike/Matrix Spike Duplicate* - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	*Relative Percent Difference* - The measurement of precision between duplicate analyses
BRL	*Below Reporting Limit*
NS	*Not Specified*
NA	*Not Applicable*

Flags:

Organics -

J	Estimated value below the reporting limit and at or above the method detection limit.
B	Analyte found in the associated blank, as well as in the sample.

Inorganics -

B	Estimated value below the reporting limit and at or above the method detection limit.

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 2 Cell 71 1.0-0.0
Sample Number: BC-71
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-1/35113-7950
Date/Time Sampled: 12/19/95 10:10
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	110	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 2 Cell 59 1.0-0.0
Sample Number: BC-59
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-2/35114-7950
Date/Time Sampled: 12/19/95 10:25
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	4600	2000	200	12/22/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 2 Cell 76 1.0-0.0
Sample Number: BC-76
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-3/35115-7950
Date/Time Sampled: 12/19/95 10:40
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	11	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 2 Cell 80 1.0-0.0
Sample Number: BC-80
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-4/35116-7950
Date/Time Sampled: 12/19/95 10:55
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	110	50	5	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 2 Cell 57 1.0-0.0
Sample Number: BC-57
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-5/35117-7950
Date/Time Sampled: 12/19/95 11:10
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 2 Cell 67 1.0-0.0
Sample Number: BC-67
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-6/35118-7950
Date/Time Sampled: 12/19/95 11:35
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	1100	500	50	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 2 Cell 55 1.0-0.0
Sample Number: BC-55
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-7/35119-7950
Date/Time Sampled: 12/19/95 11:55
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	610	500	50	01/02/96

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 1 Cell 27 1.0-0.0
Sample Number: BC-27
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-8/35120-7950
Date/Time Sampled: 12/19/95 13:10
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	65	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 1 Cell 46 1.0-0.0
Sample Number: BC-46
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-9/35121-7950
Date/Time Sampled: 12/19/95 13:25
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	130	10	1	12/29/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Pile 1 Cell 25 1.0-0.0
Sample Number: BC-25
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-10/35122-7950
Date/Time Sampled: 12/19/95 13:35
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/22/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 1 Cell 2 1.0-0.0
Sample Number: BC-2
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-11/35123-7950
Date/Time Sampled: 12/19/95 13:50
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/22/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 1 Cell 30 1.0-0.0
Sample Number: BC-30
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-12/35124-7950
Date/Time Sampled: 12/19/95 14:05
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
Motor Oil (C22-C32)	700	200	20	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Report Generated: 01/02/96

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 1 Cell 43 1.0-0.0
Sample Number: BC-43
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-13/35125-7950
Date/Time Sampled: 12/19/95 14:15
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

EPA 8015 MODIFIED
FUEL FINGERPRINTING (GC)

Preparation Method: EPA 3550S

Company: McLaren/Hart
Project Name: Mobil Jalk Fee
Sample Description: Bio Pile 1 Cell 21 1.0-0.0
Sample Number: BC-21
Date/Time Received: 12/20/95 09:50
Date Prepared: 12/20/95 15:00
Initial Wt./Volume: 30 grams
Final Volume: 5 mL

SDG #: 13167
Project Number: 030601414002
Lab ID: 13167-14/35126-7950
Date/Time Sampled: 12/19/95 14:30
Matrix: Soil (S)
Batch Number: 4781-951220
% Moisture: NA

Analyte	Result mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)	Dilution Factor	Date Analyzed
No petroleum fractions found	BRL	10	1	12/27/95

The cover letter and enclosures are integral parts of this report.

Approved by: _____ Date: 1-2-96

MBT Environmental Laboratories

Master Builders Technologies

Appendix E

Results of Soil Gas Survey

January 9, 1996

EST1327

Mr. Tabb Bubier
McLaren/Hart
16755 Von Karman Avenue
Irvine, California 92714

Subject: Multi-Depth Soil Gas Survey Report
Mobil Oil Site
10607 Norwalk Boulevard
Santa Fe Springs, California

Dear Mr. Bubier:

Environmental Support Technologies, Inc. is pleased to submit the enclosed Multi-Depth Soil Gas Survey Report for the Mobil Oil site located at 10607 Norwalk Boulevard in Santa Fe Springs, California. The report presents the objectives and field analyses results of the soil gas survey.

The soil gas survey included the installation of eighteen soil gas sampling probes. Soil gas samples were collected and analyzed on-site for volatile organic compounds including halogenated and aromatic hydrocarbons. The soil gas survey was conducted in general accordance with Los Angeles Regional Water Quality Control Board requirements dated March 8, 1994.

Please review the report and telephone our office at (714) 457-9664 if you have any questions or comments.

Sincerely,

Environmental Support Technologies, Inc.

Kirk A. Thomson

Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

cc: EST Project File

23011 Moulton Parkway • Suite E-6 • Laguna Hills, California 92653 • 714/457-9664 • Fax 714/457-0664

MULTI-DEPTH
SOIL GAS SURVEY REPORT

MOBIL OIL
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA

Prepared for:

McLaren/Hart
16755 Von Karman Avenue
Irvine, California 92714

Prepared by:

Environmental Support Technologies, Inc.
23011 Moulton Parkway
Suite E-6
Laguna Hills, California 92653

Project No. EST1327

January 9, 1996

LIMITATIONS AND WARRANTIES

This Multi-Depth Soil Gas Survey Report has been prepared for the exclusive use of McLaren/Hart and assigned interested parties. The report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

The information provided in this report is based on measurements performed in specific areas during a specific limited period of time. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the conclusions and recommendations contained in this Multi-Depth Soil Gas Survey Report should be reviewed and modified or verified in writing by Environmental Support Technologies, Inc. (EST).

Soil gas sample analyses are conducted using laboratory-grade gas chromatography equipment. Chemical compound identification is performed using quantitative methods. Chemical compound identities should be verified using gas chromatography/mass spectrometric analyses methods. Soil gas survey data should be used in conjunction with other site specific data.

There is no investigation which is thorough enough to absolutely exclude the presence of hazardous material at the project site. Therefore, if none are identified as part of a limited investigation, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of an investigation. EST, despite the use of reasonable care and a commitment to professional excellence, may not identify the presence of hazardous materials and hazardous compound concentrations in soil, soil gas, and/or groundwater. EST assumes no responsibility for conditions not investigated or for conditions not generally recognized as environmentally unacceptable, at the time of the investigation.

Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

David M. Pride
Senior Environmental Chemist

1.0 INTRODUCTION

On January 2, 1996, Environmental Support Technologies, Inc. (EST), at the request of McLaren/Hart, performed a multi-depth soil gas survey at the Mobil Oil site located AT 10607 Norwalk Boulevard in Santa Fe Springs, California. The soil gas survey included the installation of eighteen (18) soil gas sampling probes including nine (9) 5-foot-deep probes, eight (8) 10-foot-deep probes and one (1) 8-foot-deep probe. Soil gas samples were subsequently collected and analyzed on-site for volatile organic compounds (VOCs), including halogenated and aromatic hydrocarbons. This soil gas survey report was prepared based on soil gas analyses data collected during the survey.

2.0 OBJECTIVES OF THE SOIL GAS SURVEY

The objectives of the soil gas survey were to:

- Aid in identifying potential vadose zone source areas of VOCs, including halogenated and aromatic hydrocarbons.
- Assess the lateral and limited vertical extent of VOCs in surficial soils.
- Supply data to aid in the effective placement of borings, if necessary.

Soil gas sampling is a monitoring technique for the presence of VOCs in soil and should be used in conjunction with other site-specific data. Soil gas sampling is limited in its applications depending on site conditions. Some factors affecting the distribution of VOCs in the subsurface are listed in Appendix A.

3.0 RATIONALE FOR THE LOCATIONS OF SAMPLING SITES

The approximate locations of soil gas sampling probes are shown in Figure 1. The locations of soil gas probes were selected and cleared of underground utilities by McLaren/Hart field personnel. Soil gas probes were installed at nine (9) locations, with eight (8) locations containing one (1) 5-foot probe and one (1) 10-foot probe and one location containing one (1) 5-foot-deep probe and one (1) 8-foot-deep probe.

4.0 METHODS AND PROCEDURES

Field methods and procedures used to perform the soil gas survey are described in this section. The soil gas survey was performed in general accordance with Los Angeles Regional Water Quality Control Board (LARWQCB) "Requirements for Active Soil Gas Investigation" dated March 8, 1994.

4.1 SOIL GAS PROBE INSTALLATION AND COMPLETION

Construction of a typical soil gas sampling probe is shown in Figure 2. Soil gas probes were installed using either a percussion-hammer or hydraulic-ram. Once a probe was installed to the desired depth, the hollow probe drive-rod was withdrawn, leaving the stainless steel probe point and Nylaflow™ sampling tube in the subsurface. Silica sand was poured around the probe tip to allow for diffusion of soil vapors. The remaining annulus was filled with hydrated bentonite/cement slurry to grade. The probe point and sampling tube assembly were left in place (dedicated) as a long-term soil gas monitoring point. The sampling tube was plugged with a stainless-steel machine-screw, folded over, and pushed down-hole until slightly below grade. The remaining depression was filled with concrete patch material and finished flush with surrounding paving material.

4.2 SOIL GAS SAMPLE COLLECTION AND HANDLING

Soil gas samples were collected using the soil gas sampling system shown in Figure 3. The soil gas sampling system was constructed of stainless-steel, glass, Nylaflow™, and Teflon™ components. Instrumentation associated with the sampling system included a calibrated flow-meter and vacuum gage. Vacuum integrity of the sampling system was tested prior to, and after the soil gas survey using leak-down testing methods. The soil gas sampling system and instrumentation were operating as required on both occasions. Soil gas sampling probes were purged at a flowrate of about 100 milliliters per minute (ml/min).

A site-specific probe purge volume versus sample concentration test was initially performed to evaluate the appropriate volume of gas to be purged from each probe prior to sample collection. Time-series sampling of at least one probe was conducted to evaluate trends in soil gas concentrations as a function of purge volume. After purging, soil gas samples were withdrawn from the sample stream using a glass syringe fitted with a disposable needle and Mininert™ gas-tight valve. Soil gas samples were immediately injected into a gas chromatograph (GC) after collection.

4.3 SOIL GAS SAMPLE ANALYSES (AROMATIC AND HALOGENATED HYDROCARBONS)

Soil gas samples were analyzed in the field using a mobile laboratory equipped with a Varian™-3400 GC configured with a photo-ionization detector (PID), and an electrolytic conductivity detector (ELCD) in series. These detectors were used to analyze soil gas samples for aromatic and halogenated hydrocarbons using a method similar to EPA Method 8010/8020. The detection limits for the aromatic and halogenated hydrocarbons analyses were one microgram per liter (μg/L).

4.4 INITIAL MULTI-POINT EQUIPMENT CALIBRATION

A summary of the Quality Assurance/Quality Control (QA/QC) analyses is presented in Table 1. The GC used for soil gas analyses was calibrated using high-purity solvent-based standards obtained from certified vendors. GC calibration standards were prepared in high-purity methanol solvent. GC calibration using solvent-based standards was performed using varying injection volumes of the undiluted solvent-based standard. If necessary, stock solvent-based standards were diluted to an appropriate concentration. Diluted standards were prepared by introducing a known volume of stock solvent-based standard into a known volume of high-purity solvent.

Initial calibration was performed for 25 target compounds. The GC was calibrated using three standard injections to establish a three-point calibration curve. The lowest standard was not higher than five times the method detection limit (or 5 μg/L). The percent relative standard deviation (%RSD) of the response factor (RF) for each target compound did not exceed 20 percent except for trichlorofluoromethane (Freon™-11), dichlorodifluoromethane (Freon™-12), 1,1,2-trichlorotrifluoroethane (Freon™-113), chloroethane, and vinyl chloride, which did not exceed 30 %RSD. Identification and quantitation of compounds in the field was based on calibration under the same analytical conditions as for three-point calibration.

4.5 LABORATORY CONTROL SAMPLE

A laboratory control sample (LCS) from a different source or lot number other than the initial calibration standard was used to verify the true concentration of the initial calibration standard. The LCS included LARWQCB target compounds, and the RF for each compound was within 15 percent of the initial calibration.

4.6 DAILY MID-POINT CALIBRATION CHECK

Daily field calibration of the GC consisted of a mid-point calibration using a standard containing 14 target compounds. The daily mid-point calibration check included the 12 target compounds specified in LARWQCB requirements dated March 1994. The RF of each compound (except for Freons™ -11, -12, and -113, chloroethane, and vinyl chloride) was within 15 percent of the average RF from the initial calibration. The RF for Freons™ -11, -12, and -113, chloroethane, and vinyl chloride were within 25 percent of the initial calibration. If these criteria were not met, the GC was re-calibrated. Daily calibration was performed prior to the first soil gas sample analysis of the day. One-point calibration was performed for all compounds detected at the site to ensure accurate quantitation. Subsequent calibration episodes, if deemed necessary, consisted of at least one injection of the standard exhibiting a similar detector response as that of samples encountered in the field.

4.7 BLANK INJECTIONS

The syringes used for soil gas sample collection were periodically filled with ambient air or high-purity carrier-grade gas from a compressed gas cylinder. The ambient air or high-purity gas was injected directly into the gas chromatograph. The blank injections served to detect potential cross-contamination of the sampling equipment and to verify the effectiveness of decontamination procedures.

4.8 END OF DAY GC TEST RUN

A LCS was analyzed at the end of each field day. The LCS contained the same compounds as the daily mid-point calibration standard (minimum of 12 compounds). The LCS was procured from a source other than the initial multi-point calibration standard. The RF for each LCS compound was within 20 percent of the average RF for the initial calibration. If this criteria was not met, additional LCSs were analyzed.

4.9 DECONTAMINATION PROCEDURES

Probe installation and sampling equipment in contact with site soil or the soil gas sample stream were decontaminated prior to collection of each soil gas sample. Decontamination of probe installation equipment was performed by immersion and scrubbing in Alconox™ detergent solution, rinsing in tap-water, rinsing in VOC-free water, followed by air drying. Decontamination of soil gas sampling equipment was performed by baking at elevated temperatures (<160° Celsius) inside the GC oven.

4.10 REPORTING OF SAMPLE RESULTS AND QA/QC INFORMATION

Reporting of sample analyses results and QA/QC information is in accordance with the Los Angeles Regional Water Quality Control Board's "QA/QC and Reporting Requirements for Soil Gas Investigation" dated March 8, 1994.

5.0 SOIL GAS SURVEY RESULTS

A summary of field analyses results for soil gas samples collected at the Mobil Oil site is provided in Table 2. Field analyses reports for soil gas samples, GC calibration data, and method detection limits for aromatic and halogenated hydrocarbons are provided in Appendix B. Soil gas samples collected during the survey contained concentrations of tetrachloroethene (PCE). A concentration of 1 μg/L of PCE was detected in soil gas collected from Probe SG8-5. A concentration of 3 μg/L of PCE was detected in soil gas collected from Probe SG4-10.

TABLES

TABLE 1

SUMMARY OF
QUALITY ASSURANCE/QUALITY CONTROL ANALYSES
FOR SOIL GAS SURVEYS

CALIBRATION AND LABORATORY CONTROL SAMPLES		
DESCRIPTION	FREQUENCY	PRECISION GOAL %RSD or %DIFF
INITIAL THREE–POINT CALIBRATION (25 Target Compounds)	At the beginning of the soil gas survey, unless the RPDs of the initial laboratory check sample or daily mid–point calibration check samples exceed their goals.	20–30 (1)
INITIAL LABORATORY CONTROL SAMPLE (LCS) (25 Target Compounds)	At the beginning of the survey, following the initial three–point calibration.	15 (2)
DAILY MID–POINT CALIBRATION CHECK (12 Target Compounds)	At the beginning of each day.	15 (3) 25 (3)
LAST GC TEST RUN (12 Target Compounds)	At the end of each day.	20 (4)

FIELD CONTROL SAMPLES		
DESCRIPTION	FREQUENCY	PRECISION GOAL
BACKGROUND SAMPLE (5)	Minimum one per day.	N/A
SYRINGE BLANK (5)	Minimum one per day.	N/A

%RSD = Percent Relative Standard Deviation calculated based on the initial three–point calibration.
%DIFF = Percent Difference between the response factor obtained from the LCS, the daily mid–point calibration, or the last GC test run and the average response factor initially calculated based on the three–point calibration.
N/A = Not applicable.
(1) The %RSD goal for the initial three–point calibration will be 20 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %RSD goal is 30 percent.
(2) The %DIFF goal for the LCS will be 15 percent for all target compounds.
(3) The %DIFF goal for the daily mid–point calibration check will be 15 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %DIFF goal is 25 percent.
(4) The %DIFF goal for the last GC test run will be 20 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %DIFF goal is 30 percent.
(5) A syringe/background sample will be analyzed using ambient air. If volatile organic compounds (VOCs) are not detected, the ambient air sample will represent the background sample and syringe blank. If VOCs are detected in the ambient air sample, a syringe blank will be analyzed using ultra–high–purity helium or nitrogen gas.

TABLE 2
SUMMARY OF FIELD ANALYSIS RESULTS FOR SOIL GAS SAMPLES
10607 NORWALK BOULEVARD SANTA FE SPRINGS, CALIFORNIA

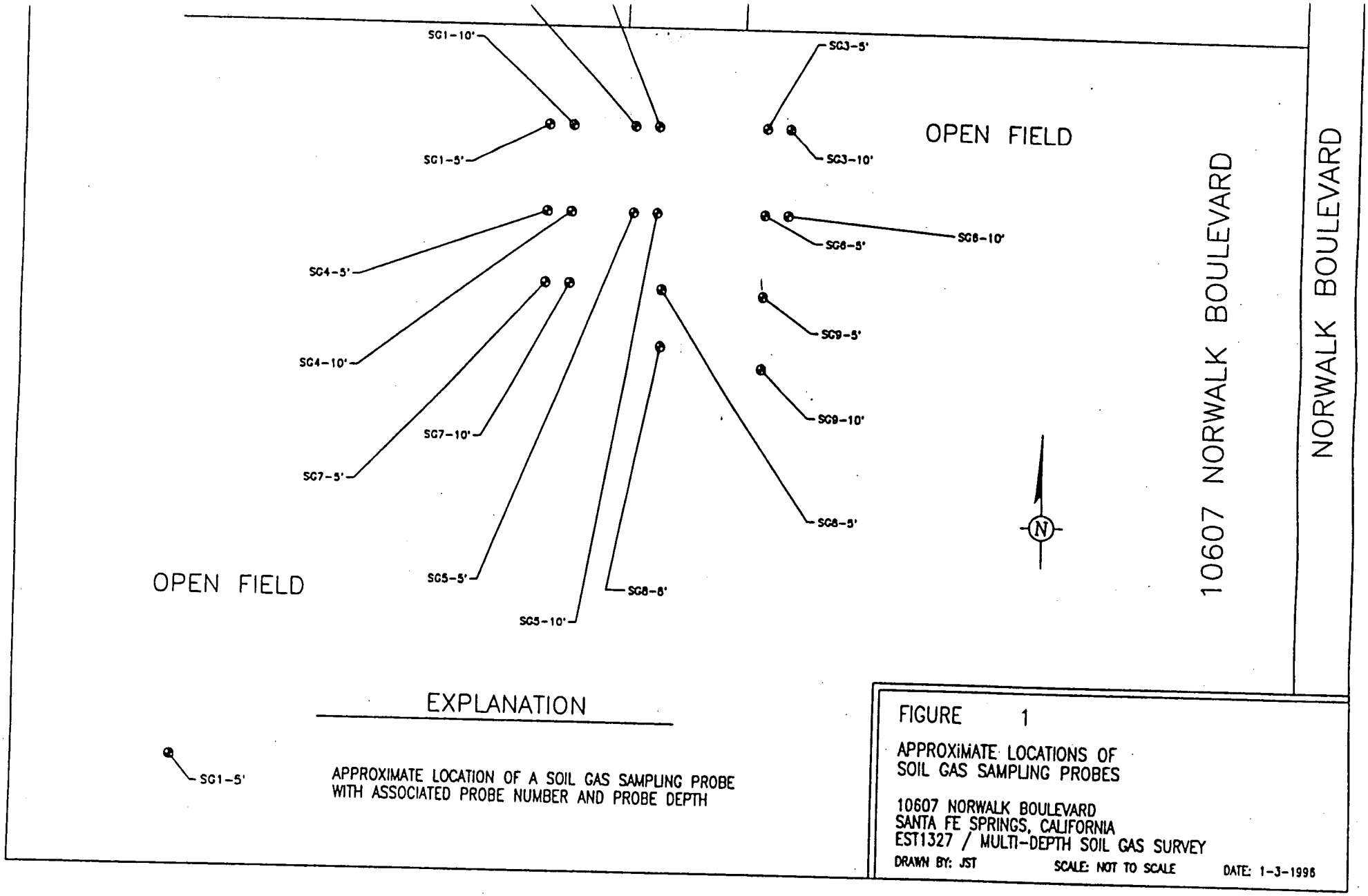
1/3/96 File 1327T2.Wk3

PROBE NUMBER	SAMPLE DATE	SAMPLE DEPTH (FT)	TIMES SAMPLED	PCE (UG/L)
SG1–5	1/2/96	5	1	ND<1
SG1–10	1/2/96	10	1	ND<1
SG2–5	1/2/96	5	1	ND<1
SG2–10	1/2/96	10	1	ND<1
SG3–5	1/2/96	5	1	ND<1
SG3–10	1/2/96	10	1	ND<1
SG4–5	1/2/96	5	1	ND<1
SG4–10	1/2/96	10	3	3
SG5–5	1/2/96	5	1	ND<1
SG5–10	1/2/96	10	1	ND<1
SG6–5	1/2/96	5	1	ND<1
SG6–10	1/2/96	10	1	ND<1
SG7–5	1/2/96	5	1	ND<1
SG7–10	1/2/96	10	1	ND<1
SG8–5	1/2/96	5	1	1
SG8–8	1/2/96	8	1	ND<1
SG9–5	1/2/96	5	1	ND<1
SG9–10	1/2/96	10	1	ND<1

ND = Not detected; analyte is below the stated detection limit
UG/L = Micrograms per liter
FT. = Feet below grade
PCE= Tetrachloroethene

Note: Concentrations reported are highest detected within calibration range.

FIGURES



EXPLANATION

SG1-5'

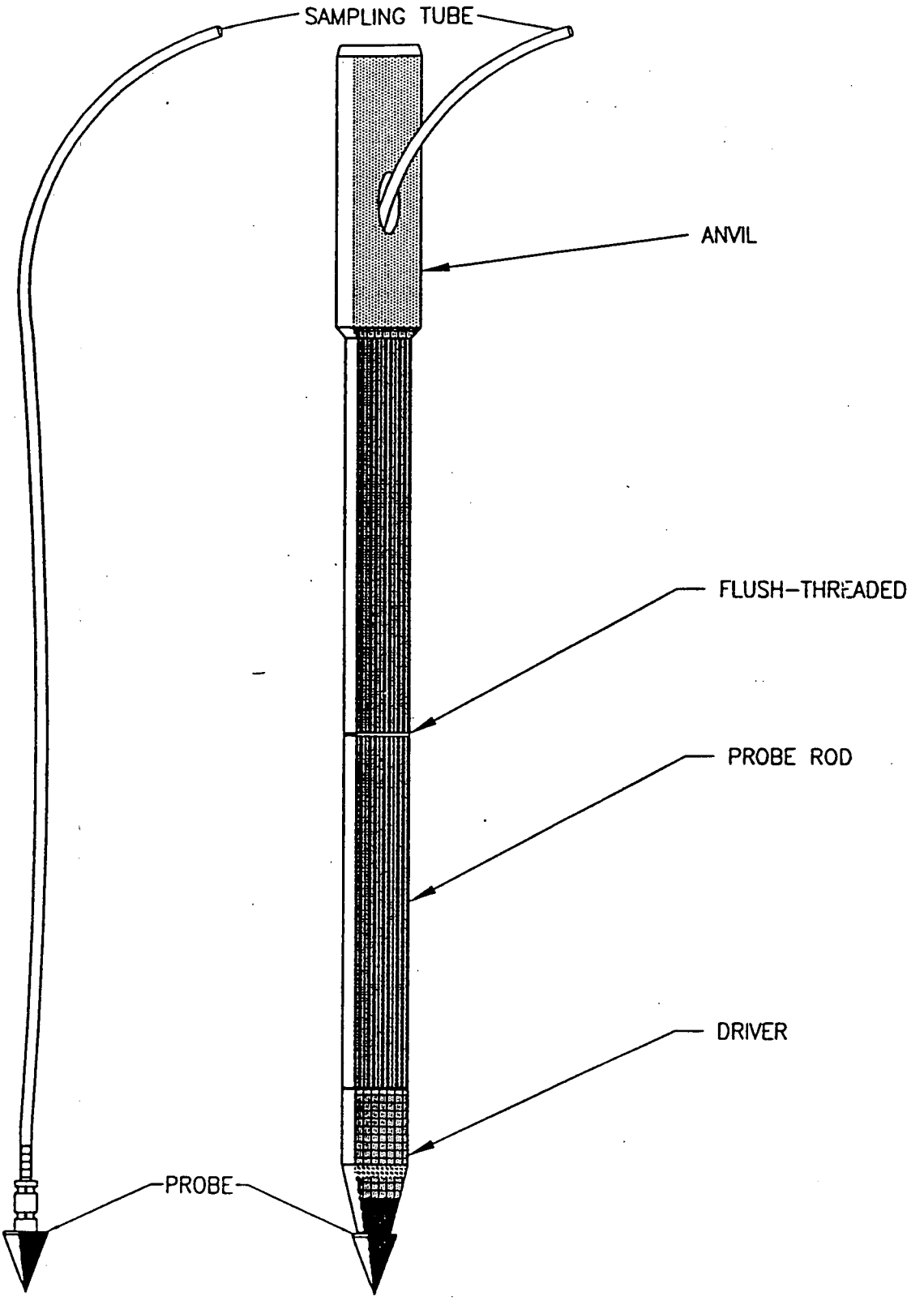
APPROXIMATE LOCATION OF A SOIL GAS SAMPLING PROBE WITH ASSOCIATED PROBE NUMBER AND PROBE DEPTH

FIGURE 1

APPROXIMATE LOCATIONS OF SOIL GAS SAMPLING PROBES

10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1327 / MULTI-DEPTH SOIL GAS SURVEY

DRAWN BY: JST SCALE: NOT TO SCALE DATE: 1-3-1998



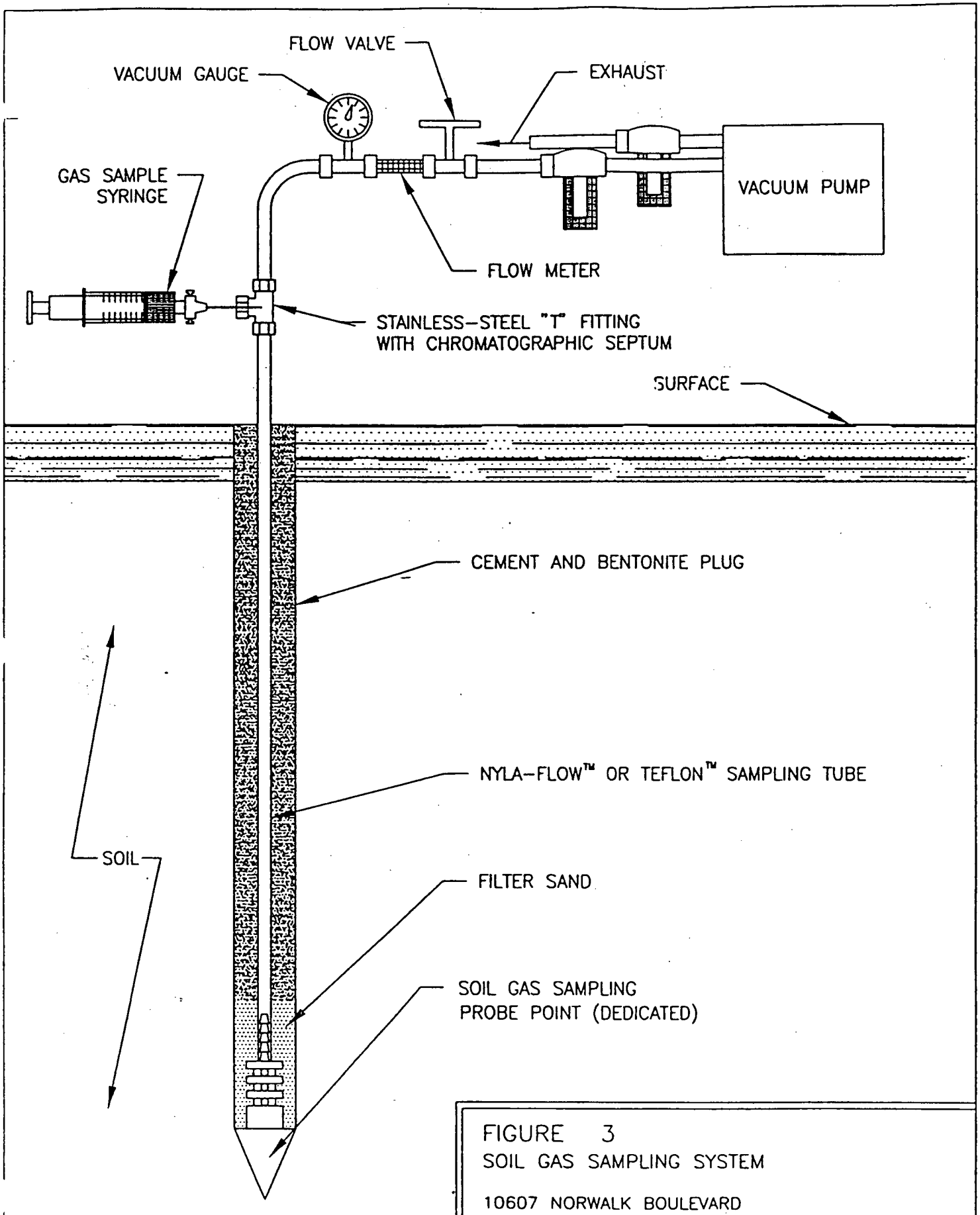
DEDICATED PORTION OF PROBE

NOTE: NOT TO SCALE

FIGURE 2
SOIL GAS SAMPLING PROBE

10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1327 / MULTI-DEPTH SOIL GAS SURVEY
DRAWN BY: JST NOT TO SCALE DATE: 1-3-1996

SGPRO.DWG



NOTE: NOT TO SCALE

FIGURE 3
SOIL GAS SAMPLING SYSTEM

10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1327 / MULTI-DEPTH SOIL GAS SURVEY
DRAWN BY: JST NOT TO SCALE DATE: 1-3-96

APPENDICES

Appendix A

FACTORS AFFECTING THE GAS-PHASE DISTRIBUTION OF VOCs IN THE SUBSURFACE

Soil and groundwater contamination by volatile organic compounds (VOCs) can often be detected by analyzing trace gases in soil just below ground surface. This technique is possible because many VOCs will volatilize and move by molecular diffusion away from source areas toward regions of lower concentrations. A gas phase concentration gradient from the source to adjacent areas is established.

The following factors affect the transport and gas phase distribution of VOCs in the subsurface.

1. The liquid-gas partitioning coefficient of the compounds of interest (the "volatility" of the compound).

2. The vapor diffusivity, which is a measure of how quickly an individual compound "spreads out" within a volume of gas.

3. Retardation of the individual compounds as they migrate in the soil gas. Retardation may be due to degradation, adsorption on the soil matrix, tortuosity of the soil profile, or entrapment in unconnected pores.

4. The presence of impeding layers, wetting fronts of freshwater, or perched water tables, between the regional water table and ground surface.

5. The presence of soil moisture around man-made structures such as clarifiers and sumps may suppress volatilization and diffusion of VOCs resulting in false negative or low soil gas concentrations.

6. The presence of contaminants from localized spills or in the ambient air.

7. Movement of soil gas in response to barometric pressure changes.

8. The preferential migration of gas through zones of greater permeability (e.g. natural lithologic variation or back-fill of underground utilities).

9. Soil temperature.

At most sites, many of these factors are unknown or poorly understood. Because of this uncertainty, soil gas sampling should be used in conjunction with other site-specific data.

Appendix B

FIELD ANALYSES RESULTS FOR HALOGENATED AND AROMATIC HYDROCARBONS

(INCLUDING CALIBRATION REPORTS, QUALITY CONTROL REPORTS, AND EXPLANATION OF METHOD DETECTION LIMITS)

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
10607 NORWALK BLVD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 1/2/96
FILE: 327ASGRP.WK3

SAMPLE ID			SG1-5	SG1-10	SG2-5	SG2-10	SG3-5	SG3-10	SG4-5	SG4-10
DATE			1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96
TIME			9:48	10:17	10:41	10:59	11:20	12:29	12:46	13:02
INJECTION VOLUME (ul)			500	500	500	500	500	500	500	500
PURGE VOLUME (ml)			50	100	50	100	50	100	50	100
DEPTH (ft)			5	10	5	10	5	10	5	10
VACUUM (in. Hg)			ND	ND	ND	ND	ND	2	ND	ND
DILUTION FACTOR			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
COMMENTS	RT	ARF								
orodifluoromethane	3:36	2.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:77	1.41E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	4:15	1.40E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
lorofluoromethane	4:35	2.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
chloro-trifluoroethane	4:98	3.74E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
-Dichloroethene	4:92	2.01E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
thylene chloride	5:54	3.24E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethene	5:82	2.99E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
-Dichloroethane	6:31	2.82E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
2-Dichloroethene	6:86	3.49E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	7:31	4.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
-Trichloroethane	7:54	3.17E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
on tetrachloride	7:73	4.54E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
-Dichloroethane	8:02	3.58E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ichloroethene	8:74	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
-Trichlorethane	10:97	3.35E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
rachloroethene	11:66	4.53E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	5.91E+06 3
Tetrachloroethane	12:52	3.60E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethane	14:35	3.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

etected; analyte is below the reportable limit of quantitation for this sample
tion time
ter
ches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter

1/2/96

: David M. Pride

REVIEWED BY : Steve Chan

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
10607 NORWALK BLVD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 1/2/96
FILE: 327ASGRP.WK3

SAMPLE ID			SG4-10	SG4-10	SG5-5	SG5-10	SG6-5	SG6-10	SG7-5	SG7-10
DATE			1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96	1/2/96
TIME			13:21	13:43	13:57	14:25	14:39	14:56	15:12	15:27
INJECTION VOLUME (ul)			500	500	500	500	500	500	500	500
PURGE VOLUME (ml)			200	300	50	100	50	100	50	100
DEPTH (ft)			10	10	5	10	5	10	5	10
VACUUM (in. Hg)			ND	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
COMMENTS	RT	ARF								
Dichlorodifluoromethane	3:38	2.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:77	1.41E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	4:15	1.40E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	4:35	2.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:96	3.74E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:92	2.01E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:54	3.24E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:82	2.99E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	6:31	2.82E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:96	3.49E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	7:31	4.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:54	3.17E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:73	4.54E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	8:02	3.58E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:74	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:97	3.35E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	11:66	4.53E+09	1.19E+06 ND<1	6.30E+05 ND<1	0.00E+00 ND<1	3.86E+05 ND<1	4.93E+05 ND<1	3.35E+05 ND<1	0.00E+00 ND<1	1.99E+05 ND<1
1,1,1,2-Tetrachloroethane	12:52	3.60E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	14:35	3.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter

1/2/96

ANALYST : David M. Pride

REVIEWED BY : Steve Chan

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
10607 NORWALK BLVD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD # 1 - 1/2/96
FILE: 327ASGRP.WK3

SAMPLE ID			SG8-5	SG9-5	SG9-10	SG8-8	NA	NA	NA	NA
DATE			1/2/96	1/2/96	1/2/96	1/2/96	NA	NA	NA	NA
TIME			15:43	15:59	16:26	16:41	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	500	500	500	NA	NA	NA	NA
PURGE VOLUME (ml)			50	50	100	75	NA	NA	NA	NA
DEPTH (ft)			5	5	10	8	NA	NA	NA	NA
VACUUM (in. Hg)			ND	ND	ND	ND	NA	NA	NA	NA
DILUTION FACTOR			1.0	1.0	1.0	1.0	NA	NA	NA	NA
COMMENTS	RT	ARF								
Dichlorodifluoromethane	3:38	2.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:77	1.41E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	4:15	1.40E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	4:35	2.40E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:96	3.74E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:92	2.01E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:54	3.24E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:82	2.99E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	6:31	2.82E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:98	3.49E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	7:31	4.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:54	3.17E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:73	4.54E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	8:02	3.58E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:74	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:97	3.35E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	11:66	4.53E+09	2.41E+06 1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:52	3.60E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	14:35	3.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter

1/2/96

ANALYST : David M. Pride

REVIEWED BY : Steve Chan

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JANUARY 2, 1996

PID/ELCD #1

FILE: 327AQCMP.WK3

		DAILY MID POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 1.00 0.00500	AVERAGE RESPONSE FACTOR	PERCENT DIFFERENCE	AMBIENT AIR 500	5000 1.00 0.00500	AVERAGE RESPONSE FACTOR	PERCENT DIFFERENCE
Dichlorodifluoromethane	2:61	0			0.00E+00	0		
RF		0.00E+00	2.71E+08	NA	ND	0.00E+00	2.71E+08	NA
Vinyl chloride	2:93	0			0.00E+00	0		
RF		0.00E+00	1.41E+09	NA	ND	0.00E+00	1.41E+09	NA
Chloroethane	3:23	0			0.00E+00	0		
RF		0.00E+00	1.40E+09	NA	ND	0.00E+00	1.40E+09	NA
Trichlorofluoromethane	3:43	0			0.00E+00	0		
RF		0.00E+00	2.48E+09	NA	ND	0.00E+00	2.48E+09	NA
1,1,2-Trichloro-trifluoroethane	4:02	0			0.00E+00	0		
RF		0.00E+00	3.74E+09	NA	ND	0.00E+00	3.74E+09	NA
1,1-Dichloroethene (PID)	4:04	859065			0.00E+00	801861		
RF		1.72E+08	2.01E+08	-15	ND	1.60E+08	2.01E+08	-20
Methylene chloride	4:52	0			0.00E+00	0		
RF		0.00E+00	3.24E+09	NA	ND	0.00E+00	3.24E+09	NA
trans-1,2-Dichloroethene	4:81	15421000			0.00E+00	12683080		
RF		3.08E+09	2.99E+09	3	ND	2.54E+09	2.99E+09	-15
1,1-Dichloroethane	5:26	13843304			0.00E+00	12970704		
RF		2.77E+09	2.82E+09	-2	ND	2.59E+09	2.82E+09	-8
cis-1,2-Dichloroethene	5:87	17027168			0.00E+00	14003096		
RF		3.41E+09	3.49E+09	-2	ND	2.80E+09	3.49E+09	-20
Chloroform	6:21	0			0.00E+00	0		
RF		0.00E+00	4.04E+09	NA	ND	0.00E+00	4.04E+09	NA
1,1,1-Trichloroethane	6:48	17179040			0.00E+00	16644552		
RF		3.44E+09	3.17E+09	8	ND	3.33E+09	3.17E+09	5
Carbon tetrachloride	6:68	0			0.00E+00	0		
RF		0.00E+00	4.54E+09	NA	ND	0.00E+00	4.54E+09	NA
1,2-Dichloroethane	6:91	15858976			0.00E+00	14485312		
RF		3.17E+09	3.58E+09	-11	ND	2.90E+09	3.58E+09	-19
Trichloroethene	7:69	15775800			0.00E+00	15743448		
RF		3.16E+09	3.50E+09	-10	ND	3.15E+09	3.50E+09	-10
1,1,2-Trichloroethane	9:97	15091728			0.00E+00	15421344		
RF		3.02E+09	3.35E+09	-10	ND	3.08E+09	3.35E+09	-8
Tetrachloroethene	10:25	20254720			0.00E+00	21995424		
RF		4.05E+09	4.53E+09	-11	ND	4.40E+09	4.53E+09	-3
1,1,1,2-Tetrachloroethane	11:68	0			0.00E+00	0		
RF		0.00E+00	3.60E+09	NA	ND	0.00E+00	3.60E+09	NA
1,1,2,2-Tetrachloroethane	13:64	0			0.00E+00	0		
RF		0.00E+00	3.10E+09	NA	ND	0.00E+00	3.10E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

1/2/96

ANALYST: David M. Pride

REVIEWED BY: Steve Chan

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
DECEMBER 5, 1995

PIDVELCD #1
FILE: 12053PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.0025	5000 1.00 0.0050	5000 2.00 0.0100	AVERAGE RESPONSE FACTOR	STANDARD DEVIATION	RELATIVE % STANDARD DEVIATION
Dichlorodifluoromethane	3:02	573661	1334281	3176086			
CF		2.29E+08	2.67E+08	3.18E+08	2.71E+08	4.42E+07	16
Vinyl chloride	3:37	3222262	7222861	14902328			
CF		1.29E+09	1.44E+09	1.49E+09	1.41E+09	1.06E+08	7
Chloroethane	3:66	3845270	7152538	12307008			
CF		1.54E+09	1.43E+09	1.23E+09	1.40E+09	1.56E+08	11
Trichlorofluoromethane	3:85	6140960	8756493	32227296			
CF		2.46E+09	1.75E+09	3.22E+09	2.48E+09	7.36E+08	30
1,1,2-Trichloro-trifluoroethane	4:53	10166728	19843072	31698096			
CF		4.07E+09	3.97E+09	3.17E+09	3.74E+09	4.92E+08	13
1,1-Dichloroethene (PID)	4:50	472191	882123	2367446			
CF		1.89E+08	1.76E+08	2.37E+08	2.01E+08	3.18E+07	16
Methylene chloride	5:08	7528205	16297352	34535264			
CF		3.01E+09	3.26E+09	3.45E+09	3.24E+09	2.22E+08	7
trans-1,2-Dichloroethene	5:36	6662157	14525040	33918944			
CF		2.66E+09	2.91E+09	3.39E+09	2.99E+09	3.70E+08	12
1,1-Dichloroethane	5:83	6632157	13988800	30010656			
CF		2.65E+09	2.80E+09	3.00E+09	2.82E+09	1.75E+08	6
cis-1,2-Dichloroethene	6:48	8154112	17745568	36682048			
CF		3.26E+09	3.55E+09	3.67E+09	3.49E+09	2.09E+08	6
Chloroform	6:82	9060320	22117280	40798912			
CF		3.62E+09	4.42E+09	4.08E+09	4.04E+09	4.01E+08	10
1,1,1-Trichloroethane	7:06	8151917	12666544	37162816			
CF		3.26E+09	2.53E+09	3.72E+09	3.17E+09	5.97E+08	19
Carbon tetrachloride	7:26	10793656	22116832	48715168			
CF		4.32E+09	4.42E+09	4.87E+09	4.54E+09	2.94E+08	6
Benzene (PID)	7:49	1545159	2887798	6612048			
CF		6.18E+08	5.78E+08	6.61E+08	6.19E+08	4.18E+07	7
1,2-Dichloroethane	7:53	8064688	17862416	39493216			
CF		3.23E+09	3.57E+09	3.95E+09	3.58E+09	3.62E+08	10
Trichloroethene	8:29	8088714	16590024	39366592			
CF		3.24E+09	3.32E+09	3.94E+09	3.50E+09	3.83E+08	11
Toluene (PID)	9:98	1525521	2812792	6154931			
CF		6.10E+08	5.63E+08	6.15E+08	5.96E+08	2.92E+07	5
1,1,2-Trichloroethane	10:57	7266563	15687840	39916768			
CF		2.91E+09	3.14E+09	3.99E+09	3.35E+09	5.72E+08	17
Tetrachloroethene	10:79	9979744	20810208	54499232			
CF		3.99E+09	4.16E+09	5.45E+09	4.53E+09	7.97E+08	18
1,1,1,2-Tetrachloroethane	12:15	8051168	17746080	40206976			
CF		3.22E+09	3.55E+09	4.02E+09	3.60E+09	4.02E+08	11
Ethylbenzene (PID)	12:14	1185584	2463309	5495597			
CF		4.74E+08	4.93E+08	5.50E+08	5.05E+08	3.93E+07	8
m,p-Xylene (PID)	12:31	3034430	6279363	13781672			
CF		1.21E+09	1.26E+09	1.38E+09	1.28E+09	8.54E+07	7
o-Xylene (PID)	12:92	1135322	2225650	5416890			
CF		4.54E+08	4.45E+08	5.42E+08	4.80E+08	5.33E+07	11
1,1,2,2-Tetrachloroethane	13:93	6760186	16370512	33202896			
CF		2.70E+09	3.27E+09	3.32E+09	3.10E+09	3.43E+08	11

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

12/5/95

Analyst: David M. Pride

Reviewed by: Ragi Abraham

TABLE B–4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
DECEMBER 5, 1995

PID/ELCD #1

FILE: 1205QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
hlorodifluoromethane	3:02	1313746			0.00E+00	0		
RF		2.63E+08	2.71E+08	−3	ND	0.00E+00	2.71E+08	NA
yl chloride	3:37	7905472			0.00E+00	0		
RF		1.58E+09	1.41E+09	12	ND	0.00E+00	1.41E+09	NA
oroethane	3:66	1934149			0.00E+00	0		
RF		3.87E+08	1.40E+09	−72	ND	0.00E+00	1.40E+09	NA
hlorofluoromethane	3:85	13467264			0.00E+00	0		
RF		2.69E+09	2.48E+09	9	ND	0.00E+00	2.48E+09	NA
,2–Trichloro–trifluoroethane	4:53	18369018			0.00E+00	0		
RF		3.67E+09	3.74E+09	−2	ND	0.00E+00	3.74E+09	NA
–Dichloroethene (PID)	4:50	1007400			0.00E+00	0		
RF		2.01E+08	2.01E+08	0	ND	0.00E+00	2.01E+08	NA
thylene chloride	5:08	17174576			0.00E+00	0		
RF		3.43E+09	3.24E+09	6	ND	0.00E+00	3.24E+09	NA
s–1,2–Dichloroethene	5:36	13935136			0.00E+00	0		
RF		2.79E+09	2.99E+09	−7	ND	0.00E+00	2.99E+09	NA
–Dichloroethane	5:83	12332472			0.00E+00	0		
RF		2.47E+09	2.82E+09	−13	ND	0.00E+00	2.82E+09	NA
–1,2–Dichloroethene	6:48	15367104			0.00E+00	0		
RF		3.07E+09	3.49E+09	−12	ND	0.00E+00	3.49E+09	NA
oroform	6:82	19865584			0.00E+00	0		
RF		3.97E+09	4.04E+09	−2	ND	0.00E+00	4.04E+09	NA
1–Trichloroethane	7:06	14451752			0.00E+00	0		
RF		2.89E+09	3.17E+09	−9	ND	0.00E+00	3.17E+09	NA
bon tetrachloride	7:26	23120688			0.00E+00	0		
RF		4.62E+09	4.54E+09	2	ND	0.00E+00	4.54E+09	NA
zene (PID)	7:49	2688910			0.00E+00	0		
RF		5.38E+08	6.19E+08	−13	ND	0.00E+00	6.19E+08	NA
–Dichloroethane	7:53	18954400			0.00E+00	0		
RF		3.79E+09	3.58E+09	6	ND	0.00E+00	3.58E+09	NA
hloroethene	8:29	17416864			0.00E+00	0		
RF		3.48E+09	3.50E+09	−0	ND	0.00E+00	3.50E+09	NA
uene (PID)	9:98	2622262			0.00E+00	0		
RF		5.24E+08	5.96E+08	−12	ND	0.00E+00	5.96E+08	NA
,2–Trichloroethane	10:57	14697888			0.00E+00	0		
RF		2.94E+09	3.35E+09	−12	ND	0.00E+00	3.35E+09	NA
rachloroethene	10:79	20590384			0.00E+00	0		
RF		4.12E+09	4.53E+09	−9	ND	0.00E+00	4.53E+09	NA
,1,2–Tetrachloroethane	12:15	17442880			0.00E+00	0		
RF		3.49E+09	3.60E+09	−3	ND	0.00E+00	3.60E+09	NA
ylbenzene (PID)	12:14	2274120			0.00E+00	0		
RF		4.55E+08	5.05E+08	−10	ND	0.00E+00	5.05E+08	NA
)–Xylene (PID)	12:31	5693587			0.00E+00	0		
RF		1.14E+09	1.28E+09	−11	ND	0.00E+00	1.28E+09	NA
Xylene (PID)	12:92	2077443			0.00E+00	0		
RF		4.15E+08	4.80E+08	−13	ND	0.00E+00	4.80E+08	NA
,2,2–Tetrachloroethane	13:93	15093680			0.00E+00	0		
RF		3.02E+09	3.10E+09	−3	ND	0.00E+00	3.10E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

12/5/95

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

Table B-5
Environmental Support Technologies, Inc.
Detection Limits for Soil Gas Surveys

Detection Limits or Reportable Limits of Quantitation for Halogenated and Aromatic Hydrocarbons are 1 ug/L when the injection volume is 500 uL. For lesser injection volumes detection limits are listed below.

Injection Volume (uL)	Detection Limit (ug/L)
500	1.0
250	2.0
200	2.5
100	5.0
80	6.3
60	8.3
50	10.0
40	12.5
20	25.0
10	50.0
5	100.0
1	500.0